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ISAZISO esilandelayo sikhishelwe ulwazi lwawonkewonke.

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uMqondisi-Jikelele

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THE following notice is published for general information.

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Director-General

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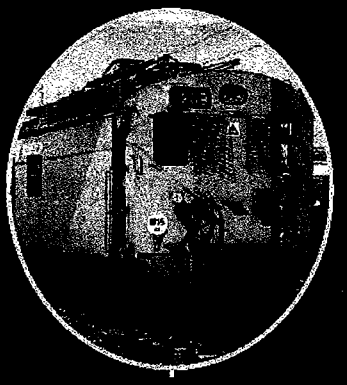

I.T.P.

ETHEKWINI TRANSPORT AUTHORITY

ETHEKWINI MUNICIPALITY

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The participation of the following government departments and departments in eThekwini Municipality as well as service providers in the preparation of the eThekwini Integrated Transport Plan 2005 — 2010 is gratefully acknowledged: —

GOVERNMENT DEPARTMENTS
- Dept of Transport
- KZN Dept of Transport
- South African National Roads Agency Ltd. (SANRAL)
- South African Rail Commuter Corporation
- eThekwini Municipality: Engineering Unit: Roads Provision Department
- Durban Metropolitan Police Services
- South African Police Services
- Airports Company of South Africa
- National Port Authority
- eThekwini Municipality: iTrump ABM
- eThekwini Municipality: Planning and Environmental Management (South Durban Basin ABM)
- eThekwini Municipality: Housing (Planning and Research)
- eThekwini Municipality: Development Planning and Management (Area Based Management and Development)
- eThekwini Municipality: Development Planning and Management (Rural Area Based Management)
- eThekwini Municipality: Development Planning and Management (Development Planning)
- eThekwini Municipality: Development Planning and Management (Environmental Management Department)
- eThekwini Municipality: Geographic Information and Policy Office (Corporate Policy)
- eThekwini Municipality: Economic Unit

CONSULTANTS/SERVICE PROVIDERS
- Arcus Gibb Consulting Design and Management
- Arup CBI Engineers/ Project Managers
- BCP Engineers
- CSIR
- De Leuw Cather Engineers, Planners and Project Managers
- Iliso Civil Engineering Consultants
- MMC Engineers
- Phepha International
- Prof CS Roebuck
- Silver Falcon Innovative logistic Solutions
- Vela VKE Consulting Engineers

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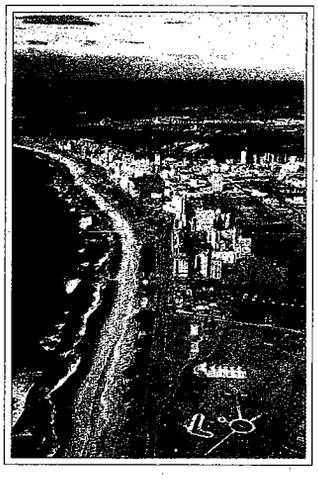
1 INTRODUCTION

This report covers the various aspects of the Integrated Transport Plan (ITP) 2005 for eThekwini Municipality. The ITP which is prepared in terms of the National Land Transport Transition Act 2000 focuses on the period 2004/05 to 2009/10 within the context of long term transport planning for the Municipality.



eThekwini Municipality covers approximately 2 300km² and is home to some 3,7 million people, just over one third of the population of KwaZulu-Natal. It is by far the largest of the two metropolitan councils in the province and accounts for 60% of economic activity within the province.

Apart from this introduction the ITP consists of 14 sections as described below. These are supported by appendices on CD.

Section 2:Transport Vision and Goals

This section sets out the ETA's Transport Mission Statement and Transport Goals within the context of the National and Provincial Transport Visions and in particur lar eThekwini's IDP Vision. **Section 2**

This section also describes each of the five primary focus areas in the ITP these being: —

- Public transport
- Freight
- Safety

• Roads

• Traffic management and control

Section 3: The IDP Spatial Framework, Long Term Trends and Key City Projects

This section looks at the growth and spatial distribution of population and employment along with the perspectives of the key sectors including: —

• Economic development sector **Section 3**

• Housing sector

• Environmental sector

• The ABM's

• The parastatals involved in transport in the Municipality

Section 3 also looks at the public transport framework, focussing on the high priority network in support of efficient land use within a defined urban edge for the Municipality.

In considering future development this section highlights a member of key city projects and major events that will impact on planning over the short to medium term.

Section 4: Transport Demand Management (TDM)

TDM is the over-arching strategy in the ITP for influencing and managing the demand for travel by private and public transport.

Section 4 reflects on transport growth trends and the basis for targeting a future modal split that will ensure a viable, sustainable transport system for eThekwini Municipality.

To achieve this target various TDM measures are reviewed in the categories of: — **Section 4**

• Private transport measures

• Public transport measures

• Land use development and management measures

• Policy and institutional measures

Within this context, this section sets out a transport management strategy for the City and looks at certain key performance indicators.

Section 5: Public Transport

This section addresses the full range of plans that form a part of the Public Transport Plan (PTP) required in terms of the NLTTA 2000. This includes: —

• Public Transport Policy

• Current Public Transport Record (CPTR)

• Operating Licence Strategy (OLS) **Section 5**

It also documents an assessment of the current public transport system and outlines the latest proposals for restructuring eThekwini's public transport system based on the analysis in the project: Fundamental Restructuring of Durban's Public Transport System (completed in Year 2000).

Within this context Section 5 sets out a range of implementation strategies and identifies various KPI's for monitoring progress in achieving the public transport goals.

Section 6: Major Road Projects

This section looks at a policy on roads and a programme for implementing roads that address the IDP development imperatives of meeting peoples' needs and growing the economy.

The projects are grouped in five categories; these being: — **Section 6**

• Accessibility

• Freight

• Safety improvements, elimination of bottlenecks and economic development

• Public transport

• Capacity

Section 7:Road Safety

This section reviews the current status of road safety in eThekwini in seven different categories of road user groups. It looks at road safety from the perspective of education, engineering and enforcement and sets out the strategies that comprise a Road Safety Plan in terms of three key thrusts, these being: — **Section 7**

• Getting the basics right

• Road safety management areas

• Focussed area wide strategies

A comprehensive action programme is set out covering a wide range of sectors.

The documentation also includes a 5 year calendar, of initiatives, events and activities along with a basis for evaluating success. Institutional arrangements and a funding analysis are also evaluated.

Section 8: Freight

This section looks at the current freight systems and activities in the eThekwini Municipal area. An analysis is made of the current levels of activity and an assessment of future generators of freight. **Section 8**

Problems and issues are highlighted and freight plan projects are identified along with a way forward to complete a comprehensive freight plan.

Section 9: Traffic Management and Control

This section looks at the development of urban traffic control in eThekwini Municipality and the progress in the development of an integrated database for purposes of traffic management, analysis and solutions. **Section 9**

Section 10: Rural Transport Strategy

This section highlights the rural transport issues and the basis for a rural transport strategy in the process of development. **Section 10**

Section 11: Special Projects

This section looks at the phased development of a People Mover System which is a tourist-focussed public transport system and service for Durban's CBD. **Section 11**

Section 12: Funding Strategy

This section looks at current funding issues, the historical pattern of funding, the potential to generate funds from existing sources and potential to develop new funding locally and from external sources. **Section 12**

Section 13:Implementation Plan

This section consolidates all projects and initiatives from the various sections of the ITP into a prioritised set of budgeted projects focussing on a 5 year implementation plan in the categories of: — **Section 13**

- Public Transport
- Road Safety
- Freight
- Traffic Management
- Roads

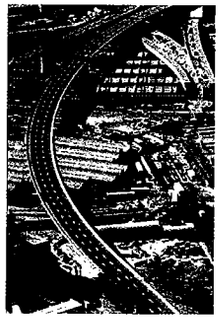
Section 14: Monitoring and KPI's

This section comprises a listing of the KPI's that have been identified for monitoring different aspects of the ITP, as further documented in relevant sections of the Plan.

Section 15: Consultation, Marketing, Communication

This section will be prepared once results of the internal and external stakeholders consultation processes are complete.

2 TRANSPORT VISION AND GOALS



The ETA's transport mission statement creates the framework for the setting of goals and the development of policy for the various components of the ITP. The mission statement has been developed within the context of the national and provincial visions for transport.

Transport has a major influence on development. At the same time it is impacted by development and land use. Consequently, the ETA's vision for transport recognises the imperatives of the IDP vision and sets a framework for goals and related policy which will have a positive impact on social and economic development and activities in the municipal area. **IDP Vision**

2.1 National and Provincial DOT Transport Visions

The national visions are as follows:

NDOT Vision for Transport: **NDOT Vision**

"Provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at improving levels of service and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable

NDOT Vision for Public Transport:

"Promote a safe, reliable, effective, efficient, co-ordinated, integrated and environmentally friendly land passenger transport system in South Africa urban and rural areas, and the southern African Region, managed in an accountable manner to ensure that people experience improving levels of mobility and accessibility"

The KZNDOT vision for transport is **"Prosperity through Mobility"**. The related mission statement reads as follows:

KZNDOT vision

KZNDOT Mission Statement for Transport:

"We will provide the public with a safe, integrated, regulated, affordable and accessible transportation system, and ensure that, in delivering on our mandate, we meet the developmental needs of our province, and we will promote transparent and accountable government, plan in accordance with the needs of our customers, and ensure effective, efficient and transparent delivery of services through co-operative governance and the appropriate involvement of the public through regular and accurate reporting.".

Key issues For transport

Key issues and concerns for transport that emerge from these statements are the need for transport systems and services that meet the needs of the end user and are: —

- safe
- reliable
- effective
- efficient
- affordable
- integrated

Further, such systems and services need to: —

System and service requirements

- improve quality of life for all
- support government strategies for social and economic development
- improve levels of accessibility and mobility
- be economically and environmentally sustainable
- make provision for community participation

Collectively, these perspectives on transport give direction to local authority vision, goals and policy for transport.

Further direction is provided by the eThekwini IDP vision as set out in the following section.

2.2 eThekwini IDP Vision & City Development Strategy

2.2.1 IDP Vision

The following is eThekwini's IDP vision statement: —

IDP Vision for eThekwini:

By 2020, eThekwini Municipality will enjoy the reputation of being Africa's most caring and liveable city, where all citizens live in harmony. This Vision will be achieved by growing its economy and meeting peoples needs so that all citizens enjoy a high quality of life with equal opportunities, in a city that they are truly proud of.

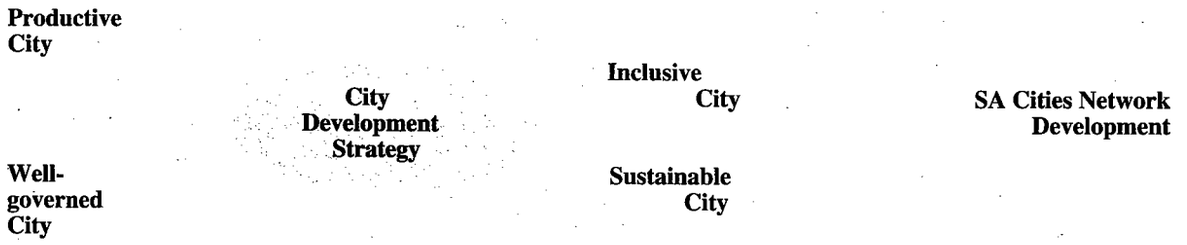
The ways in which transport can contribute to a high **quality of life** in terms of the broad objectives of the IDP vision are: —

1. Meet people's needs through: —
   - Increased access to opportunity for poorer communities through provision of an efficient and effective public transport system that is reliable, convenient, safe and affordable.
2. Grow the economy through: —
   - dependable public transport supporting a stable workforce for industry
   - creating opportunities for growth within the transport industry
3. Build people skills and technology by: —

- providing assistance and creating opportunities for SMME's to participate in various aspects of the transport industry
- applying effective technology for security, good communications to passengers, operating safety and efficiency

2.2.2 South African Cities Network City Development Strategy

South African Cities Network (SACN) has developed and adopted a City Development Strategy with four primary programmes as shown in the following diagram.



This framework provides a context for the development of transportation policy and system strategy which lends support to the eThekwini IDP vision set out above.

The following description relates transportation to each of these four programmes highlighting the major role transport can play in the development of a dynamic, well-balanced city.

Transportation and the Productive City

It is almost universally accepted that transport has played a predominant role in the economic development of all modern civilisations. Production and consumption on the scale and tempo of today would be inconceivable without a well developed and operated transport system forming a vital link in supply chain management logistics. The

provision of safe, effective, efficient and affordable transport is the cornerstone of sustainable economic and social development. Conversely, it has been observed that an underdeveloped or poorly maintained transport system acts as a serious constraint on economic growth.

- Efficient transport is an essential component in the production and distribution process. Increased transport efficiency contributes directly towards lower production costs which encourages more consumption and production.
- It facilitates domestic competition and makes exports more attractive in the world of competitive globalisation.
- An effective transport system can therefore increase the commercial and labour market efficiency of a city, and help provide an attractive platform for investors, and thereby grow the economy and create jobs.
- Productivity of the workforce, which is an area of possible competitive advantage, is negatively impacted on by unduly long travel times due to poor transport planning and infrastructure.
- Mobility is critical for people to access jobs.

Transportation and the Inclusive City

The inclusive City

Accessibility is a basic, daily need for almost all the residents of a city. A transportation system provides access to business, social and recreational opportunities, which is fundamental to experiencing a good quality of life. This is especially important for the poor and the fight against poverty.

- An efficient public transport system enables the poor to access job opportunities, at a reasonable cost and within seasonable travel time which is an important aspect of addressing poverty reduction.
- Transport imposes a daily cost on the poor. It has been estimated that in developing Africa, the poor can spend up to 30% of their income on transport alone. This results in less money for essential items such as food, clothing, education and medical treatment.
- Due to high transport costs, the poor only travel out of necessity, resulting in social seclusion. This is particularly damaging, as social relations are often a safety net for the very poor in many societies.

As much as public transport needs to respond to land use with an efficient system, land use needs to support efficient public transport. In particular the urban poor need to be as close as possible to work opportunities thereby reducing time and cost of transport for this most frequent travel need.

Accessibility for the physically challenged is another dimension of transport inclusivity that needs to be addressed holistically.

Road safety in urban areas is also a major concern. South African cities have a very poor accident record, with a high proportion of accidents involving pedestrians and children. Obviously, this has direct and major impact on quality of life.

Transportation and the Sustainable City

Transport can be a large consumer of economic resources, typically in the form of high transport subsidies and massive investment in infrastructure. The transport sector therefore has a responsibility to provide sufficient transport to reduce subsidies and to maximise the use of existing infrastructure.

Also, spatially efficient land-use patterns, that support public transport and minimise congestion are critical to long-term sustainability.

Transportation also has a significant impact on the environment, which has implications for socio-economic sustainability and quality of life experienced by residents of a city across all income levels. **The Sustainable City**

- *Atmospheric pollution*: The transport sector is a major user of non-renewable fossil fuels and one of the highest sources of greenhouse gas emissions. Other emissions include lead, carbon monoxide and other oxides, which are all detrimental to health and therefore quality of life.
- *Noise*: Traffic generated nose pollution, although not at levels to be considered a hazard, does considerably reduce quality of life.
- *Severance*: Heavily trafficked roads in particular are dangerous and difficult to cross, causing community severance.
- *Excessive land requirements* for new roads can be the result of low utilisation of inefficient public transport with associated traffic congestion. The consequential effect of such land requirements is a loss of open space and a negative impact on the natural resource base.

Taking these problems into consideration, there is a strong case to be made for developing and sustaining an efficient public transport system. In doing so there is also a strong case to be made for promoting public transport over private transport in developing transport system solutions and ensuring all forms of transport infrastructure are economically justifiable and socially and environmentally acceptable.

Transportation and the Well-governed City

Local government faces huge developmental challenges, placing great demand on urban governance and management. Good governance demands inclusion and representation from all groups in society, and requires accountability, transparency and integrity in defining and pursuing goals. **The Well-governed City**

Two issues are critical from a transport point of view: —

- First, the provision of basic access to allow all sectors of society, especially the poor and marginalised, to participate in the democratic processes. An effective, affordable Public Transport system is of particular importance;
- Secondly, the transport sector needs capacity to fulfil its public responsibilities in terms of knowledge, skills and resources.

2.3 The ETA's Transport Mission Statement

Within the context of the national and provincial visions for transport and eThekwini's IDP vision the following is the ETA's mission statement for transport. Prior to establishment of the eThekwini Transport Authority, Council was only responsible for fixed transport infrastructure. With the establishment of the ETA this responsibility now extends to the provision, management and control of all of the following: —

- Transport infrastructure
- Public transport services
- Modes and fleet

The following mission statement recognises and responds to this wider role and responsibility for transport.

ETA's Transport Mission Station:

"To provide and manage a world-class transport system with a public transport focus, providing high levels of mobility and accessibility for the movement of people and goods in a safe, sustanable and affordable manner".

ETA's transport mission statement

2.4 The ETA's Transport Goals

The extension of ETA's vision into goals for transport has identified five basic goals which directly support the main thrust of eThekwini's IDP. They are the following:

Goal 1: Effective Transport

- Needs driven
- Promotes PT over private transport
- Increases mobility and accessibility
- Targets effective use of transport subsidies
- Recognises needs of the poor and supports poverty alleviation

Goal 2: Efficient Transport

- Improves transport system cost efficiency
- Integrates transport systems
- Regulates public transport and optimises role/positioning of modes
- Integrates land use and transport activities

Goal 3: Sustainable Transport **ETA transport goals**

- Financially
- Environmentally

- Technologically
- Adequate skills & resources
- Adequate maintenance

Goal 4: Safe & Secure Transport

- Provides safe infrastructure and operating environment for all modes of transport (including non-motorised transport) and all passengers
- Ensures adequate regulation and levels of enforcement on services moving goods and people
- Promotes public transport passenger security systems and services

Goal 5: Black Empowerment

- Provides for participation in contracts
- Encourages and creates investment opportunities
- Promotes and provides training and support

2.5 Key Focus Areas in the Integrated Transport Strategy

2.5.1 Over-arching Strategy

Transport Demand Management Strategy

Transport Demand Management (TDM) is the fundamental transport strategy that over-arches and gives a context to the five driving strategies in the ITP. It focuses on reducing overall demand for road space whilst maximising the effective utilisation and efficient operation of road infrastructure for purposes of private and public transport use. It also places an emphasis on strategies which will support and encourage use of public transport. Notwithstanding the importance of public transport the transport demand management strategies described in Section 4 of the ITP support a range of both public transport and roads strategies which are needed if a balanced, effective and efficient transport system is to be provided in the Municipal area.

2.5.2 Key Focus Areas

The five key focus areas described below have been identified as the cornerstones of the ITP.

Public Transport

Public Transport

Public transport is one of the fundamental influences on economic and social well-being in the municipal area. Poorer communities and a large segment of the workforce are entirely dependent on public transport.

Against this background, rapidly escalating costs accompanied by deteriorating service levels and standards of safety and security have characterised the public transport sector for many years. However, the focus of national policy, which is the framework for local government policy, is on turning this whole situation around in the context of prioritising public transport over private transport. The Public Transport Plan (PTP), which is a component of the ITP, highlights the multi-modal, integrated approach being adopted in the eThekwini municipal area to address the many issues in this sector of transport.

Freight

Freight

A key component of the ITP is a Freight Strategy, which is closely related to the Roads Strategy for the municipal area. Mobility to move safely through the City and accessibility to the economic activity centres is essential to the economic vitality of the City. Attractiveness for business investors is also heavily influenced by the level of mobility and accessibility to key commercial and industrial development areas in the City.

Safety

Safety

The ETA's Road Safety Plan, which is another key component of the ITP, is a comprehensive and fully integrated plan. It addresses all aspects of Engineering, Enforcement and Education on an integrated basis in an effort to dramatically reduce the social and economic costs of accidents. Key aspects of the Plan will be incorporated into the ITP.

Roads

Roads strategy

The provision of an adequate road network comprising major to minor roads is a key aspect of the ITP. It is a critical component of each of the above strategies, needed to ensure successful economic and social development in the municipal area. In the eThekwini area 80% of public transport uses the road network. At the same time the majority of freight movement is road-based in the municipal area. Consequently, for such services to operate efficiently and effectively, there must be an adequate well maintained road network forming part of the overall transport system.

Traffic Management and Control

Traffic Management

Traffic management and control systems and strategies maximise the effective use of existing road infrastructure. This is one of the ITP imperatives and an essential aspect of any comprehen sive TP. In addition to minimising congestion and delay to road users in all categories, these strategies can support TDM and public transport strategies through prioritisation of public transport in areas where high impact can be achieved. Selected control strategies can also be implemented in incident management which is complimentary to the road safety strategy.

3 IDP SPATIAL FRAMEWORK, LONG TERM TRENDS AND KEY CITY PROJECTS

3.1 Spatial Framework

Currently the City does not have a fully developed Spatial Development Framework. However a draft spatial framework plan has been compiled (Section 3.4) and key issues have been identified in terms of the IDP which give direction to key components of the transport system, in particular the public transport system.

This is further supported by programmes being developed by various planning departments in eThekwini Municipality as well as input from parastatals impacting on the transport needs within the municipal area. (Section 3.5)

3.1.1 Key Nodes and Corridors

The IDP supports a municipal system of development nodes and corridors that are highly accessible to public transport. The implication of achieving widespread community accessibility in this manner is the need to increase development densities along the corridors within the limits of known carrying capacity and encourage multi-purpose development at the key transport nodes in the public transport system.

Figure 3.1 shows the existing public transport system along with the key public transport nodes, as well as highlighting the major routes and corridors within the urban edge defined in Section 3.1.2. Of the major routes and corridors, the north-south coastal corridor is the only major corridor. It extends from Isipingo in the south to the northern residential areas of KwaMashu, Ntuzuma, Inanda and Phoenix in the north. Bridge City (Link City) is the proposed, future major transport node at the northern end of this public transport corridor, where a future extension of the existing rail line from Duffs Road will terminate and interface with road based public transport.

Public transport

At the very centre of the corridor is the CBD and to the south of the CBD an elongated highly developed industrialised area known as the South Durban Basin (SDB). Extending north from the CBD there is also a narrow but intensely developed band of commercial/light industrial development along Umgeni-North Coast Road. This coastal corridor from south to north contains a high proportion of the formal employment in the municipal area.

Apart from Isipingo, Bridge City and the CBD the only other major development/ transport node in the municipal area is the Pinetown CBD. This is the hub of transport activity to the north and west.

In addition to the coastal corridor, as shown in Figure 3.1, there are major public transport routes in an east-west direction and a number of development/transport nodes of lesser significance.

3.1.2 The Urban Edge and High Priority Public Transport Network

The IDP recognises the socio-economic efficiencies of a compact city and council policy clearly supports and encourages a development focus within a boundary referred to as the Urban Edge which makes best use of the existing infrastructure.

This IDP strategy also supports a high priority public transport network (HPPTN) within the Urban Edge (Figure 3.2), and the national government's policy to promote public transport. In support of this strategy it is recognised by the transport, land use and development planners that densification of residential and employment generating development along the corridors and major routes, along with mixed socio-economic services and development at transport nodes, will increase accessibility and reduce the cost of mobility for a large segment of the urban population.

3.2 Long Term Demographic Trends

The extent and location of growth in population and employment opportunities, together with other trip attracting opportunities impacts on the transport system requirements for the municipal area. The transportation system and in particular the public transport system can support, through an adequate response, the land use development pattern or discourage through an inadequate response. It is important therefore that Council's development priorities are clearly articulated and long term development trends understood.

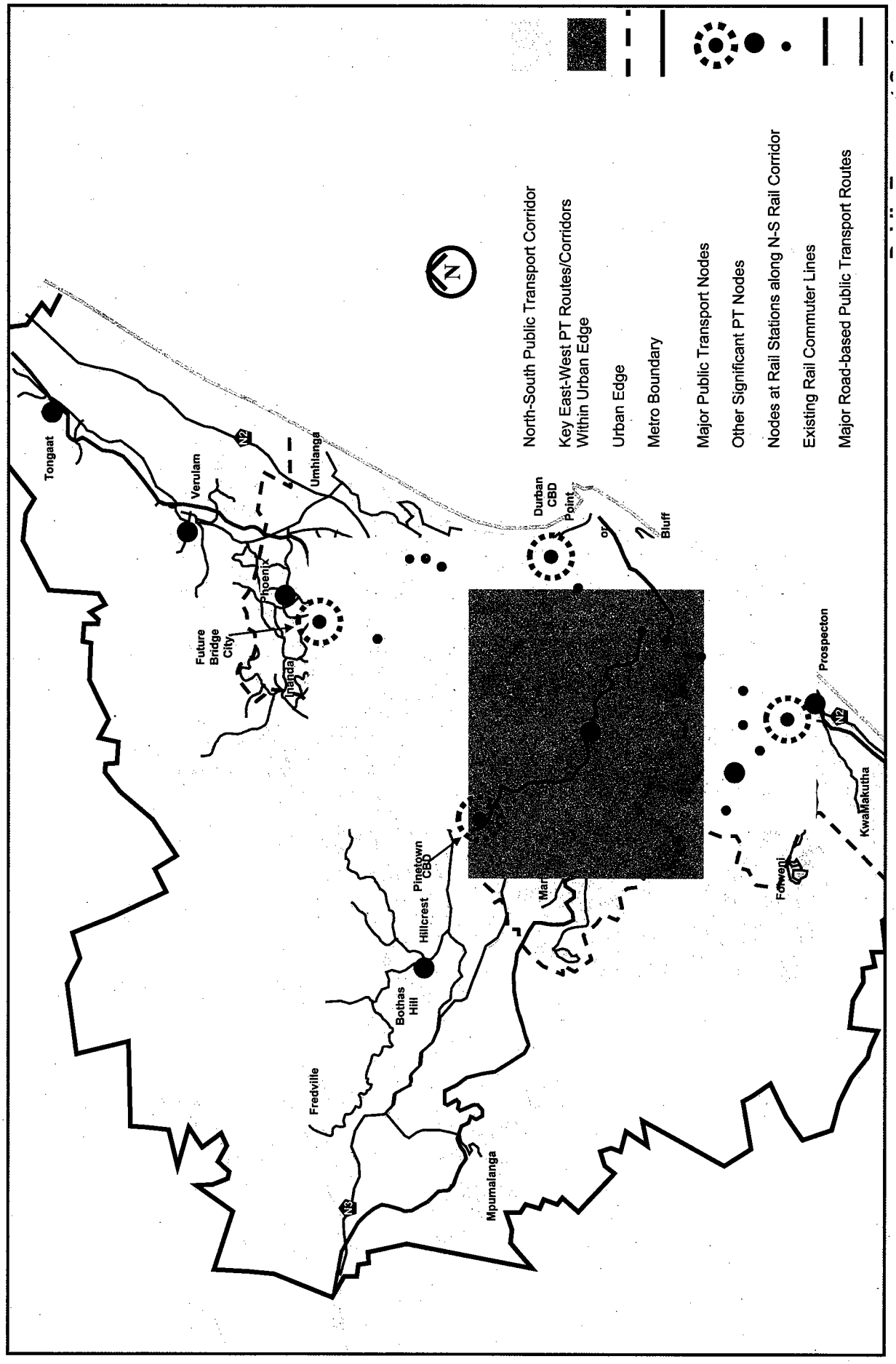


Figure 3.1:
Existing Public Transport System
Key Major Routes and Nodes

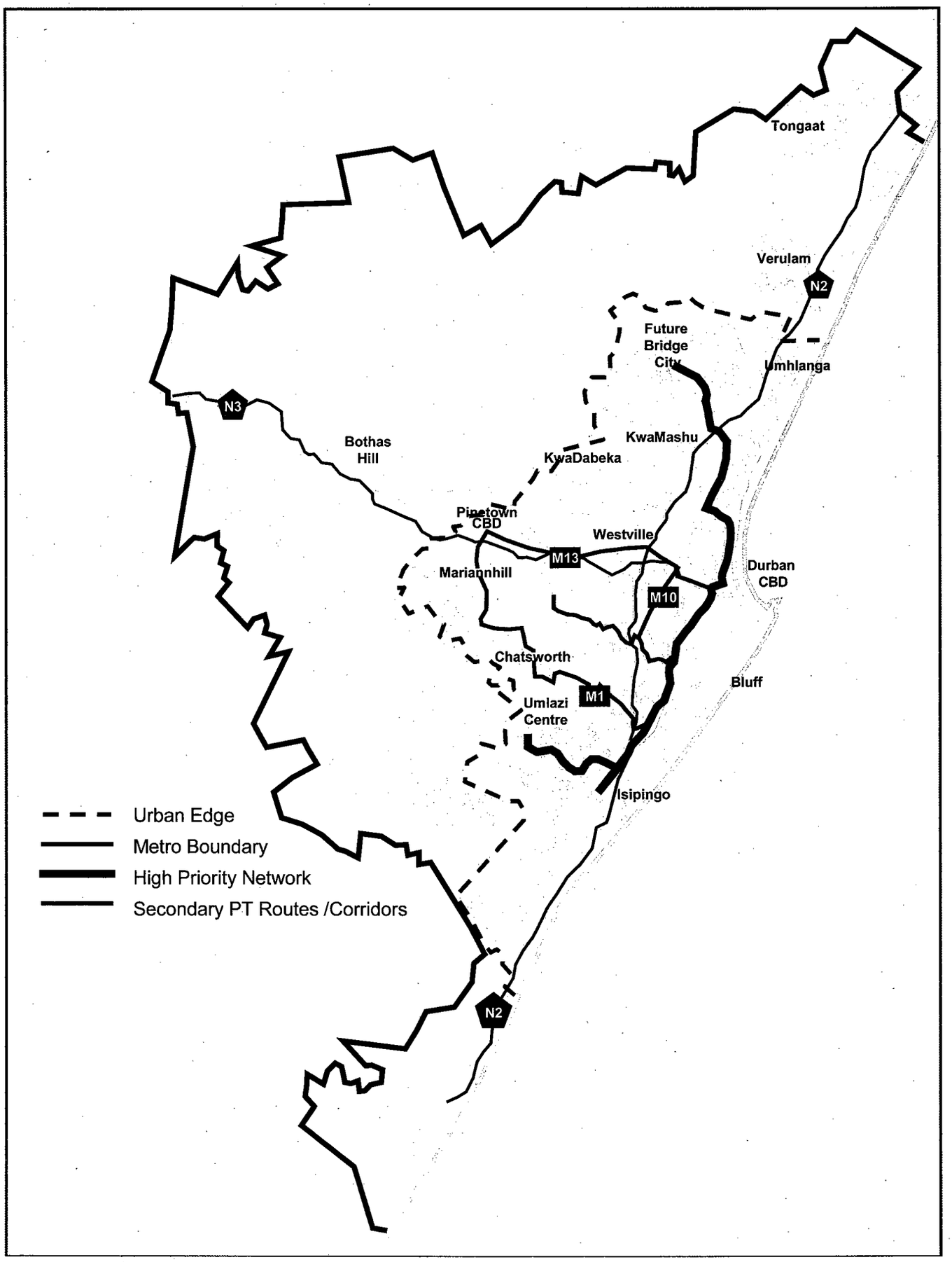


Figure 3.2:
High Priority Public Transport Network
Within Urban Edge of eThekwini Municipality

3.2.1 Population and Employment Growth and Distribution

The statistics and graphs in this section are extracted from the report "Towards an Integrated Transport Plan — May 2004".

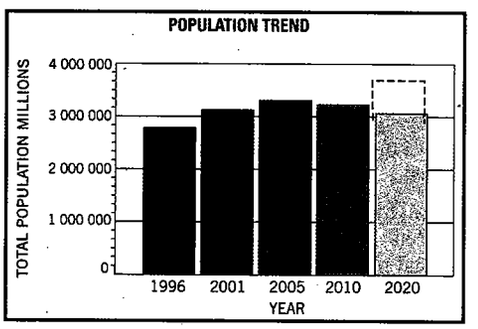
Table 3.1 shows the estimated population and employment growth over approximately twenty years for the most likely growth scenario.

Table 3.1 Population and Employment (1000's)

Most Likely Scenario (Years 2001 and 2020)

	Year 2001	Year 2020	Growth
Population	3 063	3 700	+21%
Employment	762	1 015	+33%

Previous projections for population from 2001 to 2020 have shown a net decrease in the Municipality largely due to the impact of AIDS. Current projections as shown in the above table and by the dashed line on the graph below indicate a net expected growth largely due to in migration.

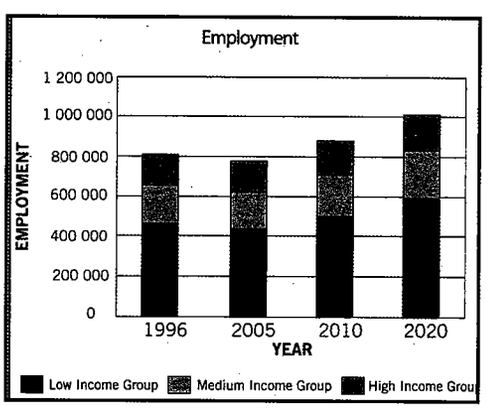


Population

- Previous projections have shown a small net decrease in population in the Municipality largely due to the impact of AIDS.
- Current projections for 2020 as shown by the dotted line indicate a net growth largely due to in migration.
- Residential areas that are expanding include Hillcrest, Cato Manor and Welbedacht to the north and Lovu/KwaMakhuta to the south.

Whilst the most recent debate on population projections suggests in-migration may result in a 21% increase in the population, most of this increase will be in the very low income group and have limited impact on propensity for peak period travel which is predominantly employment related. In particular, any such increase will have limited if any impact on the short term ITP programme.

Historically from a locational perspective the bulk of formal employment in the municipal area has been located along the coastal corridor from Isipingo in the south to the northern end of North Coast Road in the north, where it crosses the N2 freeway. The exception is the major employment node, Pinetown-New Germany approximately 20 kilometres west of the CBD. This hub of industrial/commercial activity currently accounts for some 65 000 jobs, 8% of the jobs in the municipal area.



As regards the future, considerable employment growth is predicted for all income groups over the next 15 years. As shown in the graph the anticipated growth will be highest in the low income group.

Employment growth

Based on land use modelling, it is estimated that some 250 000 jobs, representing a net increase of 33% over this period, will be located throughout the municipal area in the categories of General Commercial, General Industrial and Light Industrial.

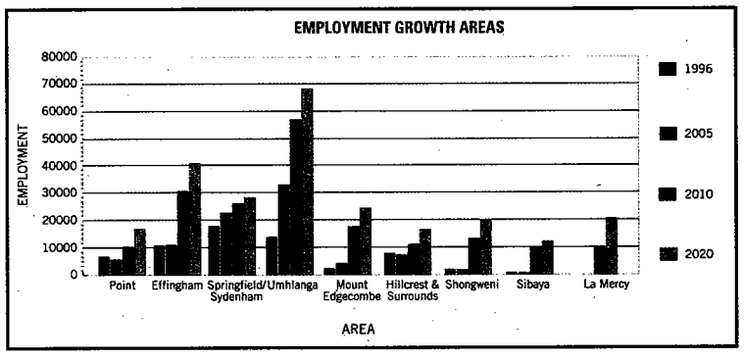
Coastal corridor employment

Although estimates used in the transportation modelling show a significant decline in employment in the established commercial and industrial areas along the coastal corridor, over the past 10 years, estimates of future employment indicate that most of this loss of employment in this corridor will be recovered by year 2020 assuming active, successful interventions by eThekwini Municipality. However, this growth will not result in any net growth above 1996 levels of employment. This erosion of employment development along the historically, intensely developed North-South Coastal Corridor and has the potential to dilute the effectiveness of an efficient public transport system serving this corridor.

In recent years the trend has been characterised by a move of commercial development from the Durban central area to the Berea, west of the CBD and to the Umhlanga area to the north. Further, there has been a deterioration and move away from the South Durban Basin to the

Pinetown/Westmead industrial area and the Effingham, Avoca industrial areas north of the Umgeni River. It should be noted that the ABM programme has been tasked with addressing issues in the South Durban Basin.

The following graph shows where future employment growth is expected. Clearly areas to the west and north feature as growth areas, whilst central, with the exception of the Point and the south do not.



To the west, considerable employment growth is expected in the Pinetown/New Germany, Shongweni area, Hillcrest and surrounds and to a lesser degree at Botha's Hill and Hammersdale. Relative to growth in these areas however major employment growth is predicted to the north at La Mercy, Umhlanga, Effingham and Mount Edgecombe.

Growth to the west

In particular, growth around the proposed King Shaka (La Mercy) international airport and the adjacent iDube Transport, scheduled for operation by Year 2010 will attract considerable employment activity both during the construction and operational phases.

3.3 Key Development Projects with the City

There are currently six key City projects in various stages of planning and development that will have a major impact on the pattern and extent of travel demand in the municipal area. They are: —

(1) The new King Shaka international airport and associated changes possible at the existing airport

(2) The iDube Tradeport adjacent to King Shaka airport

(3) The Point Development

(4) The Upgraded/Expanded Port

(5) The 2010 World Cup

(6) The ICC Expansion

These are discussed briefly below.

3.3.1 King Shaka International Airport

This development will reinforce eThekwini's position as a major tourist destination in South Africa and will be essential in support of this City's role as one of the 2010 World Cup venues. It is also considered essential to the successful functioning of the iDube Tradeport which will focus on strategic commodities importing/exporting by airfreight.

The Airport and Tradeport are located on a site of some 2040 hectares on the west side of the N2 Freeway approximately 28 kilometres north of Durban harbour and CBD. The site is easily accessible by rail and road.

3.3.2 The iDube Tradeport / IDZ

This development is located on the west side of King Shaka International Airport and will comprise the following: —

iDube Transport

- a Trade Zone focussed on a world class export environment for tenants, operators and service providers
- an Organic Farming and Training Centre for a new developing industry in growth and export of various perishable products
- a commercial centre for retail outlets, hotels, conference facilities etc.

The Tradeport will function with state-of-the-art communication systems and networking facilities which provide the producers and distributors with e-commerce, trade, order fulfilment, freight tracking along with business to business, and business to commerce facilities.

3.3.3 The Point Development

The development of uShaka Marine World as a world class tourist attraction is a catalyst to the redevelopment of the Point area into an all day hub of activity for tourists and local residents. Office and commercial retail as well as residential development will form key elements of this project which will become a major trip generator as well as trip attractor in the central area.

The Point

3.3.4 The Upgraded and Expanded Port

The Port is a major generator of transport activity in the City. Currently most transport to and from the Port is road — based. As a 'clean' cargo port it has five profiles; these being, break cargo, liquid bulk and general cargo, car terminal and ship repairs. Containerisation is a major feature of the port operations which is currently being upgraded and expanded to accommodate the considerable expected growth. Demand also exists to increase the car terminal capacity by approximately 100% although road capacity and mix of activity on the road system serving this terminal is an unresolved issue.

The Port

Port expansion also includes widening of the harbour mouth to accommodate 10 000 TEU vessels which will also impact on the trucking and handling requirements in the harbour.

3.3.5 The 2010 World Cup

As one the host cities, eThekwini will develop a well structured response to the various anticipated transport needs of locals and visitors who will be a part of this major event, either as participants or spectators. Beyond the event itself the tourism opportunities and associated needs will be incorporated into this planning.

The World Cup 2010

3.3.6 ICC Expansion

The pending expansion of ICC facilities to accommodate growing demand is recognised as an important key city project which will contribute to the re-vitalisation of the CBD.

Although not a major generator in its own right, the importance of high levels of accessibility is seen as a major key factor to the on-going success of this centre.

3.4 The Overall Planning Environment

Based on input from the Corporate Policy and Planning Units, this section gives an overview of key aspects of a spatial framework for the eThekwini Municipal Area. It also provides a context to the input received from the various planning divisions within the city and planning perspectives from selected parastatals operating within the City, which impact on transport needs for the municipal area.

Figure 3.3 shows the areas that comprise the eThekwini municipal area, defined as: —

- The urban core
- The urban periphery
- The rural/peri-urban area

Within the municipality there are five separate area based management (ABM) programmes which geographically cover a large part of the municipal area. As shown in figure 3.4 they are: —

- The CBD — the main commercial centre
- South Durban Basin — a highly industrialised elongated zone within the coastal corridor, south of the CBD
- The Inanda-Ntuzuma-KwaMashu (INK) residential areas
- The Cato Manor residential area
- Rural areas on the City's periphery

ABMs

The intent of the ABM programme is to enhance service delivery while addressing social and spatial inequities specific to the uniqueness of each area.

Collectively, the programmes of these districts, respond at local level to the development imperatives expressed in eThekwini's IDP and the City's economic development framework giving input to a spatial development framework over a large part of the municipal area.

Figure 3.3 also shows various investment and economic development nodes and corridors that include inter alia; tourism, organic and muti growing centres, and the iDube Transport logistics platform adjacent to the proposed King Shaka international airport.

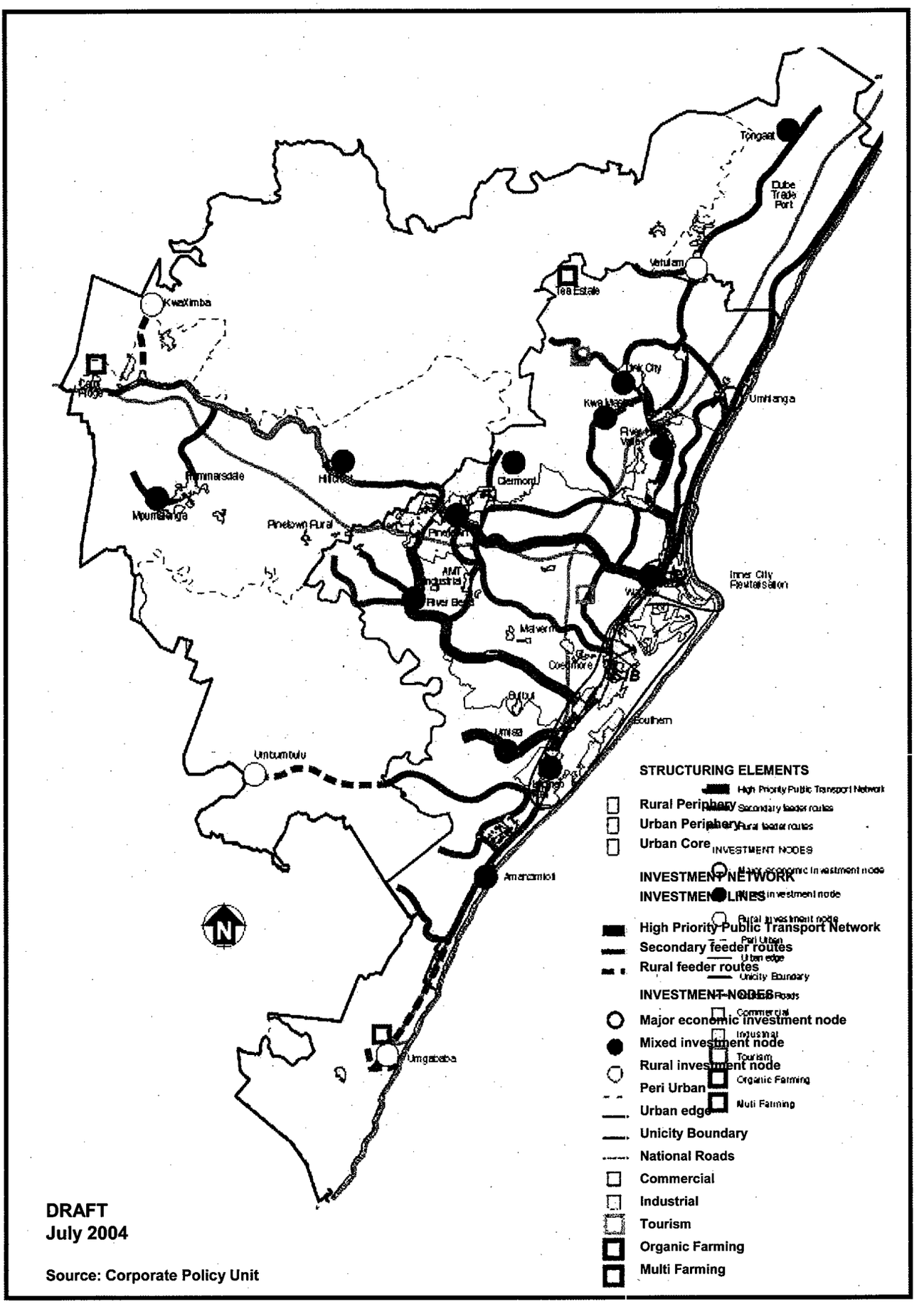


Figure 3.3:
Planning and Development Focus
eThekwini Municipality

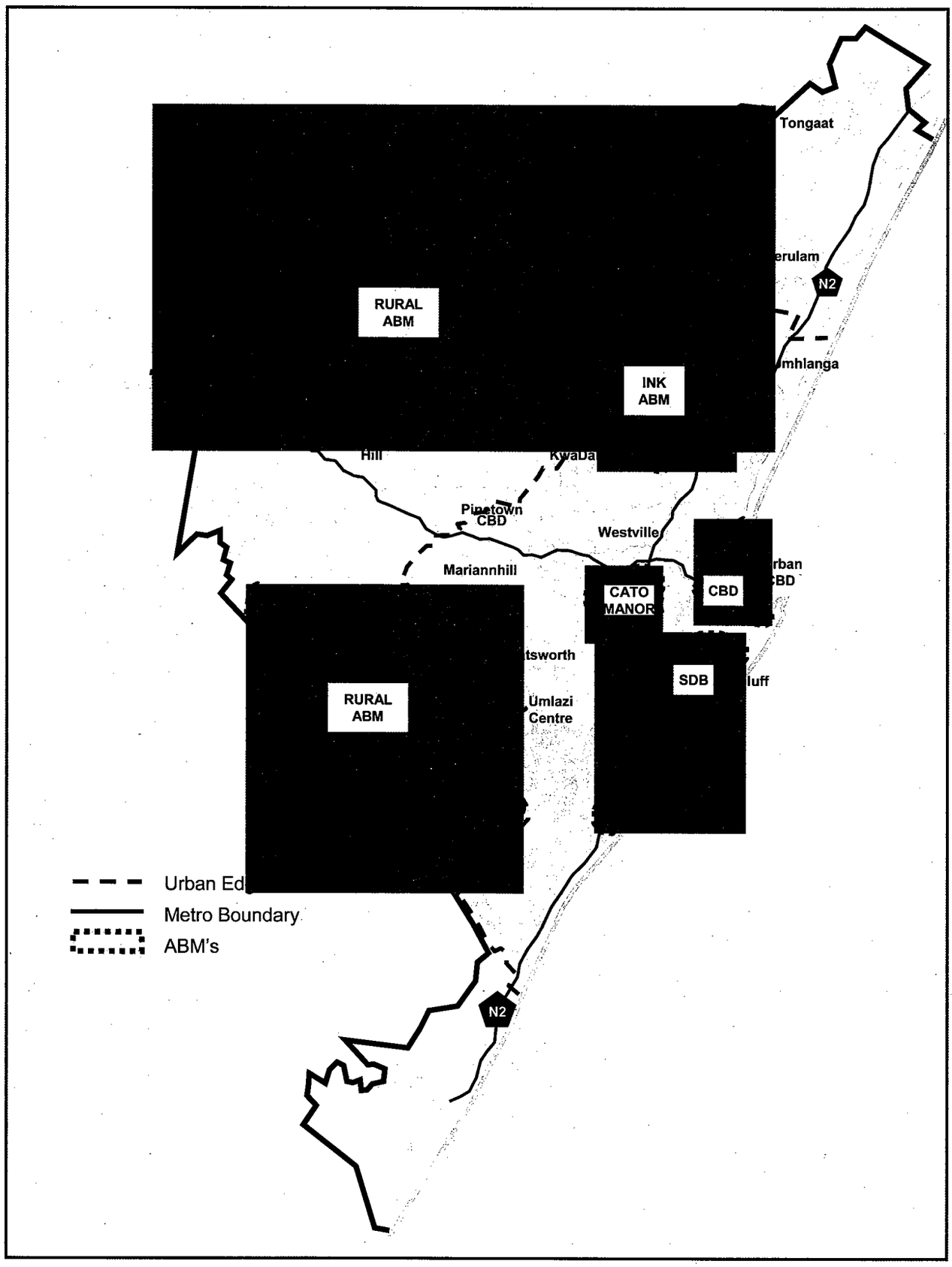
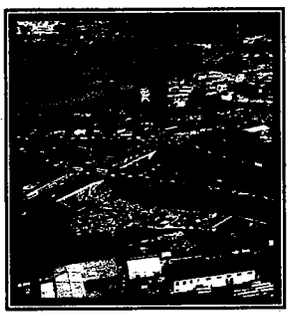


Figure 3.4:
Area-based Management (ABN) Areas
eThekwini Municipaly



Apart from these strategic new development initiatives the IDP focuses strongly on reviving the central area and South Durban Basin which in recent years have experienced varying degrees of degeneration and migration to other parts of the City.

Within the urban edge, densification is promoted to make best use of available infrastructure capacity and minimise the cost of bulk services.

Densification within urban edge

Support for densification along the routes in the high priority public transport network further supports the concept of improved cost efficient service to the community with a particular focus on the poorer community.

HPPTN densification

Cluster development at nodal points of transport activity further strengthens the efficiency of transport in both the urban and rural areas of the city. In particular, the clustering at rural nodes of social service and economic activity, apart from tourism and agriculture based activities, significantly improves accessibility for isolated and marginalised rural residents.

Cluster development

The pending development of the new international airport and associated iDube Tradeport increases the need for connectivity from the west to the north. This reinforces the decision to proceed with MR577 which will be an important commercial as well as public transport service route.

The following section flags other issues and identifies other opportunities in terms of projects and programmes identified by the various planning sectors for input to the SDF.

3.5 Inter — Sectoral Perspectives and Assessment

This section gives a brief overview of the focus of the various development and service sectors that impact on and are affected by transport in the municipal area. Within this context various projects that form a part of the ITP have been identified along with issues and concerns that impact on the integrated land-use / transport strategy for the eThekwini area.

3.5.1 Economic Development Sector

The short to medium term goals of this sector are to achieve economic growth and equity through economic empowerment, with the primary driver being job creation. In the short term a key component of the economic development programme is to develop support programmes for a number of sectors including inter alia: — the film industry, tourism, the car manufacturing industry, textiles, footwear and logistics based industries, particularly those focussed on access to international markets using air freight transport.

Whilst certain industries such as the fabric industry are experiencing serious negative growth, requiring the development of new niche markets, other new opportunities around the comparative logistical advantages created by the iDube Tradeport, adjacent to the proposed King Shaka International Airport, are being explored. In this regard organic agriculture for export markets is expected to be a significant new economic sector.

Apart from agriculture and perishable products, locational opportunities are being created at iDube for industries requiring logistical advantage through airfreight access to international imports and export markets. This may result in some re-positioning from existing industrial areas such as the South Durban Basin (SDB) which is currently close to the existing regional airport.

To some extent the new airport, tradeport and IDZ will create growing attraction for related employment growth opportunities to the north. This could also exacerbate the issue of industrial/ employment migration from existing industrial areas in the north-south corridor, in particular the SDB. This impact could however be offset to the extent that new industrial sectors are being developed which require new skills, create employment and open new markets.

Spatial and transport issues related to the economic development programme are the following.

In the short term: —

(i) the South Durban Basin (SDB) road network is congested.

(ii) poor service infrastructure in the SDB is resulting in migration to other areas, reducing the cost-effectiveness of public transport in the north-south transport corridor and necessitating investment in transport infrastructure in other areas. It should be noted that the ABM programme has been tasked with addressing issues in the South Durban Basin.

Spatial and transport issues

(iii) rail freight service is not cost competitive. It is unreliable and inefficient resulting in unnecessary road freight movement which adds to road congestion and the cost of road infrastructure.

(iv) the new International airport will require a dedicated high quality public transport service to connect Durban CBD to the airport.

(v) the iDube Tradeport will require an effective public transport service focussed on the needs of PT dependent workers.

3.5.2 Housing Sector

This key development sector has a major impact on the need for and location of transport and in itself is greatly impacted by the provision of transport infrastructure and services.

Housing perspectives

A major challenge exists for the housing sector to address the backlog in the municipal area. Against an increasing housing backlog the Municipal Housing Department is programming 16 000 new and

upgraded housing units per year. However, apart from the extent of the backlog there are location issues which are inclined to perpetuate the problem of large numbers of people being located in parts of the municipal area not easily served by cost-efficient, affordable public transport.

Current informal settlement

Of the 200 000 families currently living in informal settlements approximately 20% live outside the City's urban edge. Although relocation to more accessible areas my make economic sense, it is not acceptable to many of the families. Where greenfield sites are considered part of the solution, land cost is also an issue.

Need for greenfield sites

Although a 15 year Housing Plan does exist and within that a 5 year plan spatially located on GIS, there is an identified need for other sectors, most specifically transport and economic development sectors, to give input to preferred locations in particular for greenfield sites. Although most vacant land is in the north of the City most low income employment opportunities are to the south. Currently some 120 000 greenfield sites (6000 ha of vacant land) are needed over the next 12 to 15 years and clearly these anomalies need to be addressed in a way which will support economic development and affordable transport for the poorer communities.

Cost of land

Clearly cost of land is a major issue and in this regard some creative approaches are needed which take into consideration not only the cost of providing land but the on-going costs of servicing the community in a municipal context.

Although the cost of land may be lower further away from well located areas, the combined costs of providing bulk infrastructure and community facilities may be higher which could result in the City undertaking financially unviable projects. Is order to ensure that this does not occur, a strategic planning team evaluates all new housing projects in terms of location. A costs surfaces model has also been developed to determine the bulk infrastructure cost implications of proposed developments.

The National Department of Housing as well as the City's IDP advocate the development of sustainable human settlements in well located areas. It is also reassuring to note that the National Department of Housing is looking at ways to cover the high cost of land which will be funded separately from the housing subsidy as well as new policies promoting medium density housing. In order to create these viable and sustainable housing projects close to economic opportunities, public transport, and existing services and facilities there needs to be political and community support for developing a range of housing typologies which result in higher densities — a shift away from the conventional detached housing on a single stand scenario currently being rolled out.

Pilot project

While there are plans to pilot types of projects in appropropriate areas of the City, it would be useful to undertake a pilot project where selected sites that support the High Priority Public Transport Network can be evaluated in terms of cost/benefit analyses which consider the travelling needs of the community and the appropriately adjusted subsidisation of land, and if necessary, housing.

3.5.3 The Environmental Sector

Environment sector perspectives

This sector has highlighted a number of generic issues that need to be recognised in the development of the ITP. These are: —

Issues

- development densification and rural development/accessibility issues impacting on urban sprawl
- protection of open space
- development density thresholds and protection of catchment areas
- use of appropriate modes
- energy efficiency
- pollution reduction
- safe transport of hazardous materials
- extension of public transport to attract medium and high income residents in the longer term

Catchment area protection

In spatial terms, the protection of open space and rural catchment areas are important. In promoting rural accessibility and rural development it is important that difficult to serve urban sprawl should not be further encouraged to the detriment of promoting development within the urban edge identified in the IDP. Whilst densification of development which supports public transport and leads to economies of scale that can enhance environmental management capabilities is encouraged, it needs to avoid upper catchment areas.

Drainage course

In this same context the need for transport centres following main drainage courses needs to be minimised. From an environmental perspective the promotion of public transport over private transport is strongly supported as well as the use of modes which reduce the number of vehicles needed. In particular the use of rail is supported for both public transport and the movement of freight.

Drainage course

In the context of movement of hazardous materials environmental management supports the development of a freight strategy which identifies hazardous chemical routes taking due consideration of the adjacent land use and activities.

Energy policy & public transport

In the context of developing an energy policy the ITP promotes use of clean fuels and reduced levels of emissions as well as improved traffic management and increasing use of public transport across all income sectors which will reduce congestion and air pollution.

In this regard the need to develop a 'carbon model' was identified as a priority project. Such a project would take the form of a pilot project which would: —

- calibrate an appropriate traffic model for benchmarking and monitoring carbon emissions in line with managing greenhouse gases and climate disruption.

Carbon model

The model is a first crucial step in the process of reducing carbon emissions in eThekwini Municipality. Working from the benchmark it would become possible to test various transport strategies in terms of their impact on carbon emissions. In addition the model would allow monitoring of progress in achievement of any targets established for reductions.

This has several benefits for eThekwini Municipality and South Africa as a whole. In the near future South Africa is expected to become a signatory to the Kyoto protocol under the UNFCCC which addresses matters of carbon emission reductions in the international community. Initiation of a carbon emissions reduction process in eThekwini could therefore attract national support. Further, international 'carbon' finance may be possible from countries who, unable to make their own targets, can offset their commitments in terms of participation in the efforts to another country such as South Africa.

3.5.4 The CBD/ITRUMP Area Based Management District

CBD/ITRUMP ABM perspectives

This ABM comprises the area also known as the Inner Thekwini Regeneration and Urban Management Programme (ITRUMP) area which is recognised as one of the main economic activity centres in the municipal area. Apart from employing approximately 123 000 people including 12 000 in the informal sector, this area contains the primary tourist activity centre in the City, attracting national and international tourists throughout the year. Notwithstanding, this ABM district is challenged with the need firstly, to regenerate the inner city which has in parts experienced a significant reduction in investor confidence and associated migration of commercial office and retail activities towards the north and to a lesser degree the west.

Secondly, there is the need to address major social issues, which negatively impact on the local economy. The associated challenge is to establish an alternative, safe and vibrant inner city which the City's residents are proud of.

The ITRUMP project team's response has identified six strategies to address these challenges; these being: —

Six strategies

(i) increase economic activity

(ii) reduce poverty and social isolation

(iii) make the inner city more viable

(iv) develop effective and sustainable urban management

(v) improve safety and security

(vi) undertake institutional development

Inner city congestion, accessibility, adequate infrastructure as well as safety and security are all transport related issues that impact on programmes needed to give effect to some of these strategies. These issues need to be addressed within the context of the I
TP integrated with the planning imperatives for this area of the city.

Congestion generated by public transport vehicles needs to be addressed in the context of rationalisation of public transport services and infrastructure. In particular the use of taxi ranks and associated, functional holding areas needs resolution. A public transport distribution system serving the CBD and integrated with public transport services to/from the CBD is also essential for improved accessibility.

Improved pedestrian circulation and accessibility to public transport ranks and services is also essential for upgrading public transport service in this district.

Safety and security in and around public transport ranks also needs attention as a component of upgrading and rationalising public transport service in this area.

CBD issues

A key private transport issue is freight delivery and the appropriate management and control of kerbside space. This issue needs to ultimately be addressed as one of the detailed aspects of the freight strategy plan.

The current road system defining approaches to the CBD used by private and public transport vehicles results in relatively high speed traffic through heavily pedestrianised areas, in particular in the Warwick Avenue precinct. This together with localised congestion requires a review of the road system to and through the area.

Over-arching all of these required initiatives is the need for a comprehensive approach to enforce-

ment of public transport equipment and operating safety standards as well as adequate security at public transport facilities.

In response to these issues the CBD/ITRUMP planning team have identified the need for the following programmes: —

(i) an efficient multi-modal public transport system focussed on maximising the accessibility of the inner city

(ii) the development of 'corridors of excellence' focussed on gateways and key routes through the city. Such routes would require effective public transport and accessibility to adjacent land use.

(iii) support for and development of mixed land use which will improve security in the CBD and establish higher thresholds of activity in support of public transport and higher order facilities.

Within the context of an efficient multi-modal public transport system there is the need to address pedestrian mobility and safety which could also be a part of the Safety Plan in the ITP.

3.5.5 The South Durban Basin (SDB) ABM District

This is a highly industrialised mixed land use zone along the coastal corridor south from Durban CBD. It includes the port to the north and extends some six kilometres south of the airport to include Umbogentwini. It is bounded on the east by the Bluff and on the west by the M4 and N2 freeways.

SDB ABM perspectives

This area is the City's largest manufacturing node and next to Durban CBD/Berea the second largest employment area in the city. It is also home to some 100 000 people many of whom are located near the industrialised areas.

In recent years, industry relocating from this area to the Pinetown/New Germany area and to industrialised areas north of the central area has been a considerable cause for concern. In response the IDP has highlighted the need to regenerate the SDB as one of the key strategies to strengthen the municipal economy.

Relocating industry from SDB

Planners responsible for the South Durban Basin ABM have identified a number of transport issues that impact on both the business and residents communities in the area. Deterioration of existing infrastructure, congestion, conflicting needs of the residential and industrial communities and lack of adequate roads and public transport infrastructure are all seen as having a negative impact on the area.

The extent and nature of road freight transport operation is also seen as an unresolved issue effecting this area in terms of environmental impact, degradation of residential areas and congestion in industrial areas. A key aspect of this problem is the dependency on road transport for freight movement. Rail which is often seen to be functionally inefficient and economically unaffordable is nevertheless considered important in resolving many of the capacity and congestion problems impacting on this area, both within and outside of the port precinct.

Road vs rail freight

In this regard, planners want to encourage increased use of rail by encouraging a more efficient inter-modal system of freight transport and any other initiative that would make rail a more attractive freight movement option.

The Port as one of the key economic precincts in the SDB is considered a major contributor to the attractiveness of the SDB for many industries. In this regard, the connectivity between the Port and the industrialised area to the south is considered poor and in need of rationalisation and upgrading.

The Port

In response to these issues the South Durban Basin planning team have identified funding requirements for the following programmes: —

ABM programmes

(i) As part of a strategy for Precinct Re-design and Upgrade, traffic and transport improvements comprising new and upgraded facilities including public transport infrastructure.

(ii) As part of a strategy for enhancement of the existing infrastructure platform, to redesign and upgrade key transport infrastructure focussed on the continued improvement of primary transport infrastructure of major roads and intersections.

(iii) As part of a strategy for developing new infrastructure, to improve transport linkages by providing additional capacity and separating residential and industrial traffic.

Although no specific projects are identified within these programes, they clearlyprovide a context for aessing transport issues in the area.

3.5.6 The Inanda-Ntuzuma-KwaMashu (INK) ABM District

This is recognised as eThekwini's biggest residential cluster. Located on the northern urban periphery within the urban edge defined by the IDP, this residential area comprises mostly low quality housing and informal settlements characterised by: —

INK ABM perspectives

- limited basic service infrastructure
- inadequate and limited social and recreational facilities and amenities

- levels of economic activity
- high levels of unemployment

Traffic and road safety issues are considered amongst the key issues faced by this area.

Addressing transport and related issues has been identified as one of the main strategies to be developed in: —

- improving living conditions for INK residents
- enhancing human capacity/potential of residents

In broad terms the transport issues identified included: —

Transport issues

- poor accessibility both geographically and in respect of access to economic, educational, social and recreational opportunities
- poor standards of safety in transport systems as well as personal security when using these systems
- increasing traffic congestion
- the need for seamless/integrated transport systems incorporating integrated fare structures
- investment in rail including an extension of the existing system to the future Bridge City development node
- improved regulation of the taxi industry
- targeted public transport subsidies that could encourage increased development densities along major public transport routes in the INK area
- provision of adequate public transport ranks and related infrastructure at development nodes and focal points within the INK area.

In addressing the transport issues the planners have identified a key strategy of improving access within INK and to Municipal area destinations. Estimated budgets have been compiled for three programmes identified as a part of the strategy; these being: —

ABM programmes

(i) Improved transport infrastructure which includes repairs and upgrades to the road and rail networks supported by an effective maintenance programme

(ii) Improved public transport services through the co-ordinated implementation of the public transport plan which provides improved access throughout the municipal area

(iii) Improved access to social services (health, welfare, education), administrative (home affairs etc) and recreational facilities (community halls, sports facilities)

Specific projects of interest identified by the planners include: —

- Taxi rank with informal trading facilities to complement existing wholesale traders at the eMtshebeni node in Inanda
- Improved access roads to the Bridge City development node in support of proposed hospital and the regional magistrates offices and municipal office
- Strong support for MR577 scheduled for completion in 2010 but highlighting the need to integrate this major arterial with adjacent land use through effective linkages with the local road network at the eastern end of the arterial

3.5.7 The Cato Manor ABM District

This district located 6 kilometres west of Durban's centre, covers some 2000 hectares and is home to some 90 000 people.

Cato Manor ABM perspectives

Only half of this hilly landscape is developable and although some formal housing exists for the full range of low to high income groups many continue to live in informal settlements.

Cato Manor ABM perspectives

A number of social and recreational facilities have been developed during the 10 years (1993 to 2003) when this area was being planned and developed with support from international funding under the control of the Cato Manor Development Association. The area also has well developed service infrastructure including major roads and stormwater reticulation.

Public transport as major mode

The opportunity to redevelop this large area close to the city centre fits well with IDP principles for densification and efficient use of infrastructure and scarce development resources. In the vision statement for Cato Manor, public transport is seen to be the major mode of transport for residents. In this context the services provided must be integrated into an effective municipal public transport system that ensures accessibility to residential, economic, social and community opportunities. Current perceptions are that this has not been achieved and that local area transport needs are not being met by public transport operators. The need for internal community mobility as well as reasonable service to significant external destinations such as the Pavillion are not being met.

Improved access to the regional road system is seen as important to the development of Cato Manor. Whilst planners would like to see access onto the N3 this is technically not possible.

Access to the N2 south of the N2/N3 systems interchange at Booth Road remains the only possible solution although some technical problems exist as regards interchange spacing and in terms of current programming this project is not expected to be implemented in the short term period.

Regional access need

The Cato Manor planning team have identified and developed provisional budgets for three programmes to address some of the issues identified. These are: —

(i) to promote the N2/Booth Road interchange in order to improve access throughout the municipal area via the regional road network

ABM programmes

(ii) to develop a programme of community-based infrastructure maintenance which could include aspects of road and public transport infrastructure maintenance

(iii) to develop additional public transport facilities

3.5.8 The Rural ABM District

This includes all the rural parts of the eThekwini Municipal area that fall outside the urban edge defined in the IDP.

There are in effect two large separate areas; one in the north-west and the other in the south-west. Together these areas comprise 36% of the municipal area but accommodate only a small percentage of the population.

Rural ABM perspectives

The terrain is generally rugged and hilly and the population widely dispersed. There is very limited employment in the area; unemployment is high and most employed residents travel to the peri-urban and highly developed parts of the municipal area. Consequently, trips to work are often long and service often limited due to the dispersed population pattern.

Access to economic and social opportunity is recognised by the rural planners as a fundamental issue for rural residents. Agricultural survival strategies and tourism development are seen as important economic opportunities for these areas that require improvement in road access.

Access to opportunities

Rural investment nodes identified in the IDP and social service nodes form part of a hierarchical development node system that will become part of the four local area development plans for the sub-regions in the Rural ABM. These nodes will also need to become focal points of rural transport which will support the activities located at these development nodes.

Investment & social service nodes

Although no specific locations have been identified the Rural ABM planners have raised concern over the lack of north-south road linkages in the rural areas. This apparent lack of connectivity is seen as negatively impacting on accessibility to these areas and the potential to increase economic and social development opportunities. Responding to this need must be carefully planned if the sensitive ecology of the east-west drainage catchment system in this area is to be protected.

North-south road link

In determining transport needs and priorities in the rural areas it is clear that local communities must play a major role. Further in recognising the need to apply different standards to difficult categories of roads in the Municipal area, there is the need to reach agreement on what these standards should be and how they impact on the potential for rural residents to play a major role in maintaining these facilities.

In the area of public transport the planners have flagged the need to ensure reasonable standards for roads used by public transport vehicles and provision of ranks at key locations as well as lay-byes along the roads with shelter for the passengers.

Standards

The main strategy of the ABM programme in respect of transport is to improve access to centres of economic opportunity.

Support programmes with provisional budget estimates have been identified. These are: —

(i) Road improvements focussed on improving community access within and beyond rural areas through the rehabilitation and upgrading of existing roads and construction of new connections.

ABM programmes

(ii) Formalisation of public transport facilities to improve safety and efficiency and to function more effectively as locations for trading activities and other services to meet local demand.

(iii) A rural transport strategy which is being developed at present.

Further, the planners would like to see a focus on public transport access, as a first priority, by extending public transport systems to all rural areas. This to be followed by formalisation of transport stops at nodes and along public transport routes.

3.5.9 The Port Authority

Durban Harbour is recognised as a major traffic generator in the municipal area with most of the land-side activity being road freight transport. Although the hinterland of Gauteng and over-border destinations account for 60 — 70 % of freight movement to/from the port, very little of this movement is by rail.

Port Authority perspectives

Rail vs road freight

This is seen as a key issue requiring strategic intervention at national level, as the achievable capacity on the road system could become a constraining influence on development of the Port.

As noted under key projects, the port is known as a clean cargo port handling general cargo, break bulk cargo, and liquid bulk. It is a major point of export for motor vehicles and also handles ship repairs.

Although development proposals for upgrading the capacity of the port remain within the footprint of the port the impact on external transport infrastructure is significant.

Shepstone Rd

Projected growth in all cargo handling aspects of port activity suggest the need for additional road capacity and rail service. Some of these projected transport system requirements may not be achievable in the context of competing demands from other activities in the area. In particular the projected demand for doubling the car terminal and plans to move general purpose cargo to the Point side of the harbour would load additional traffic on Shepstone Road in the Point. The ability of the local road system to handle the competing needs of the Port along with the growing demand from uShaka Marine World and various residential and commercial developments associated with the re-development of the Point is questionable. This is a fundamental issue currently facing eThekwini and the Port Authority.

Victoria Embankment rail

With the positioning of general cargo to Point side berths the use of rail on the Victoria Embankment line will increase. It will be necessary to consider how this will impact on access to the new marina.

Maydon Rd

The issue of security and the potential to close Maydon Road has been raised by the Port Authority. The effect of restricted access could be an issue that would require investigation on the extent of the impact.

Khangela Bridge

Currently additional road capacity to the Port is being developed by the construction of Khangela Bridge connecting Bayhead Road to Sydney Road. This will significantly reduce congestion on South Coast Road and provide easy access from Bayhead to the M7 (Edwin Swales Drive) which connects to the N2. The Sydney Road route towards the north is also a less congested, higher capacity arterial road than South Coast Road.

3.5.10 Airports Company South Africa (ACSA)

ACSA perspectives

The current regional airport on the coast approximately 15 kilometres south of Durban CBD is also a diversion airport for Johannesburg International Airport. As such it must have the capability of serving any international aircraft flying into South Africa until such time as the new King Shaka International Airport is operational. Depending on the development programme for the new airport this may require a runway extension of the existing airport of some 600 metres.

Pasassenger growth

At the same time passenger growth of approximately 9% per annum indicates the current terminal buildings could reach capacity by Year 2007.

Parking at existing airport

The demand for parking also suggests the need for additional capacity; and plans are in progress for, the development of a 1500 multi-storey carpark which may be built on a phased basis taking into consideration the timing of the development of the new international airport.

Redevelopment of existing airport

ACSA also has considerable property holdings around the airport. Some of this has been developed but large tracts of land are still available for development. Apart from land located on both sides of the N2 freeway the airport site itself becomes available for some alternative form of development once relocation to King Shaka has taken place. Considerable debate on a wide range of optional uses for this land has already taken place; however, there are no clear indications of what land uses should be planned for at this point in time. Clearly whatever use is made of this land will have a significant impact on land use and transport needs in the municipal area and will need to be carefully integrated into long term planning for the city.

Access to new development east of existing airport

In the short term, a new logistics platform on a 2.4 hectare site on the east side of the runway is under consideration by Mondi and could become operational in 2006. Currently access is via Avenue East into Refinery Road and Fibres Road. This road would be inadequate to accommodate the 40 000kg axle load vehicles and alternative/modified access to this site will be needed.

3.6 Spatial Model and Key Points of Integration

3.6.1 Background

The eThekwini Transport Authority has identified the need for upgraded and expanded transport infrastructure and services based on accessibility and mobility needs, capacity requirements as well as safety issues and problem locations.

The ETA has recognised that mobility needs differ widely across the broad spectrum of stakeholder groups that depend on transport in some form or other. These groups include inter alia: —

Identification of transport needs

- Low to high income commuters
- Special needs travellers in all groups
- Long distance traveller
- Various categories of commercial and industrial
- Tourists
- Emergency services
- Other

The specific needs of the various groups differ for different periods of the day, days of the week and seasons of the year, and in some instances, the needs of one group conflict with another.

Notwithstanding, the ETA approach is to interpret and prioritise the need for transport infrastructure based on demand, taking into consideration, in so far as possible, the needs for all user groups. In so doing public transport commuter needs are prioritised over private transport commuter needs in line with national policy. Road capacity deficiency locations and bottlenecks that have a serious negative impact on mobility and accessibility to and from key commercial and industrial areas and activity centres are also targeted. This is essential if infrastructure is to be maintained at levels which ensure economic activity in key areas of the City does not deteriorate, to the overall detriment of the city.

Public over Private transport

Establishing connectivity of the road network to link areas of greatest need to well resourced areas has also highlighted various project needs particularly in the peri-urban and rural areas.

A comprehensive Road Freight Plan is currently being developed in phases. This plan will assist in establishing some of the project priorities. The Road Safety Plan has also identified projects in this ITP and assisted in establishing priorities that acknowledge the importance of addressing safety issues and problem locations in both the private and public transport systems.

EMME2, the transportation planning model used by the ETA for modelling current and future travel demand, creates the framework for identifying and testing transport requirements, for both the private and public transport systems.

The level of demand that defines the need for transport system capacity invariably occurs in the peak period with the am peak being the critical period. In this regard the current and future levels and location of population and employment provide essential planning inputs for the modelling of demand and the planning of transport infrastructure and service requirements. Categories of employment and income levels affecting car ownership and trip making propensity have also provided input to this process.

Transport demand modelling

3.6.2 Key Aspects of Demographic Input to Transport Modelling

Demographic information used in the transport modelling process was taken from the Policy Unit's model. At the time of preparation, various departments in eThekwini Municipality participated in the process and there was basic consensus on the levels and location pattern of future population and employment.

Demographic model

Whilst recognising the issues around the migration of commercial and industrial employment activity from Durban CBD and the South Durban Basin respectively, the land use framework also acknowledged the pressures and trend for future development to the north in the areas of Umhlanga, Effingham, Mount Edgecombe, Springfield and La Mercy, and to a lesser degree to the west, in particular the Shongweni area.

Growth trend

The land use model which had a ten year horizon to 2010 was extrapolated to a twenty year horizon (2020) for transportation planning purposes. During the course of preparation of the current transport plans for the ITP the projections were refined to further reflect the trend, in particular the impact of the proposed international airport at La Mercy and iDube Tradeport on travel demand to the north.

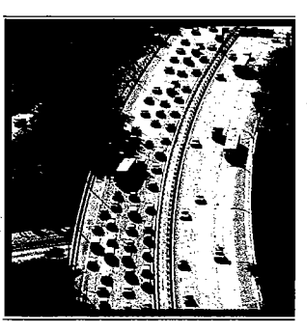
Having quantified the trend development pattern the transport planning process also recognised the need to reduce the trend peak hour demand for private transport to ensure a transport system which would be sustainable into the future. This has been effected through various Transport Demand Management (TDM) measures and public transport system improvements discussed in other sections of the ITP.

Reducing peak private transport demand

4 TRANSPORT DEMAND MANAGEMENT

4.1 Background

Transport Demand Management (TDM) may be described as a system of actions and interventions used to alleviate traffic congestion-related problems through improved management of vehicle trip demand.



In the South African context this translates into a variety of 'carrot' and 'stick' interventions focussed broadly on increasing the use of public transport in the peak and decreasing the use of private transport.

Clearly the type, extent and severity of actions taken at any point in time needs to be considered against the severity of the problems being addressed.

4.2 Growth Trends and Target Modal Split

4.2.1 Growth Trend

Current estimates place the trend growth in peak period person trips between 2005 and 2020 at 22%. This translates into a 50% increase in trips by car and a 3% decrease in trips by public transport.

Trend growth in cars

Considering current levels of congestion, accommodating a 50% increase in private motor vehicles on the road system is unacceptable and unaffordable in both financial and environmental terms.

4.2.2 Implications of 'Do Nothing'

In the event no actions are taken to address the trend of increased use of private transport and decreased use of public transport a number of services problems will result; these being: —

- a progressive deterioration in all forms of transport services throughout the city, including public transport, freight transport and private transport.
- Road congestion affecting all forms of transport.
- Road based public transport will become increasingly costly and inefficient as sprawling land use patterns continue to dilute the effectiveness of public transport.
- The demand for road capacity will exceed affordability of providing addtional road space.
- A significant reduction in accessibility and mobility for the public
- Reduced accessibility for freight movement with the concommitant effect of increased cost for commercial and industrial activities and reduced attractiveness for commercial/industrial development in eThekwini.

Impact of "Do Nothin"

Overall these and other consequences of a 'do nothing' approach to the current trend will have significant negative implications on key components of the IDP vision, these being: —

- Providing a high quality of life
- Meeting peoples needs
- Growing the economy

4.2.3 Target Modal Split

The extent of the peak hour within the peak period is affected by increasing levels of congestion which cause a spreading of the peak traffic demand. This is a natural phenomenon which in the eThekwini area is expected to result in approximately half of the peak two hour traffic occurring in the peak hour by year 2020. By implication this also means that the heaviest traffic demand will also extend well beyond a one hour period.

Spreading of peak

Any further reduction in peak travel can only take place with a change in modal split encouraged by the use of TDM measures. The White Paper on National Transport Policy published in 1996 advocated a modal split to public transport of 80:20 (public: private). Based on screenline surveys, the estimated current modal split in the municipal area overall is 52:48 in the two hour peak period.

Current modal split

This represents the aggregation of lower income areas such as Umlazi with a modal split as high as 94:6 through to high income areas with a very low modal split to public transport.

Recognising the current trend of declining use of public transport a more realistic target of reversing the trend and achieving a positive growth in public transport has been set. Table 4.1 highlights the implications of reversing the trend modal split in year 2020 of 42:58 (public: private) to 55:45, an improvement in the current modal split of 52:48.

Target modal split

Table 4.1 Trend versus Target Modal Split
(AM Peak 2 Hours — Years 2005 and 2020)
(Person Trips — 1000's)

	Year 2005	Year 2020
Trips by Car:		
- Trend	333	498
- Target		384
- Difference		-114
Trips by Public Transport (PT):		
- Trend	366	355
- Target		469
- Difference		+114
Modal Split (PT:Car):		
- Trend	52:48	42:58
- Target		55:45

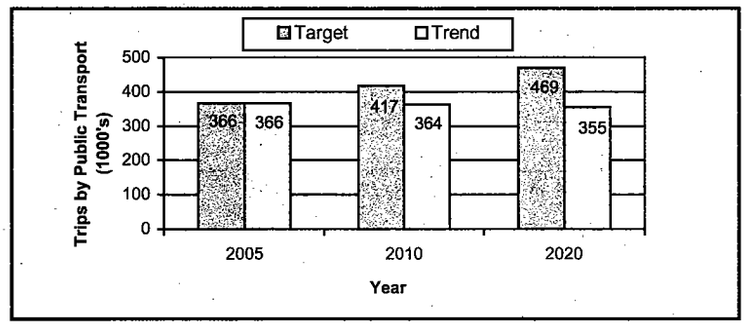


**Figure 4.1: Person Trips by Public Transport (1000's)
Peak Period (2 Hours) — Years 2005 to 2020 Trend vs Target**

During the period 2005 to 2020 the 'target' modal split will result in estimated peak period growth in person trips by public transport of 103 000 as opposed to the 'trend' decrease of 11 000.

Target increase in PT

The significant growth of 28% in public transport demand will need to be taken up by the restructured public transport system which is described in Section 5 of the ITP.

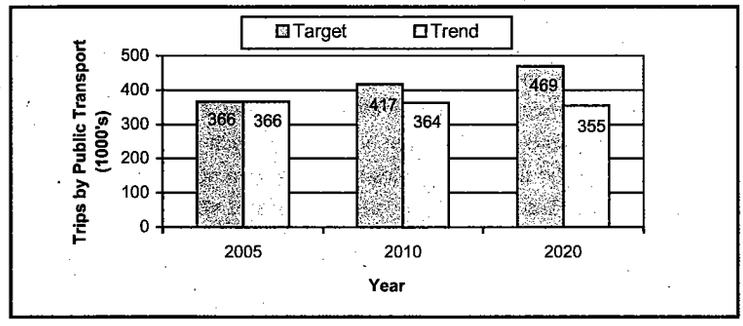
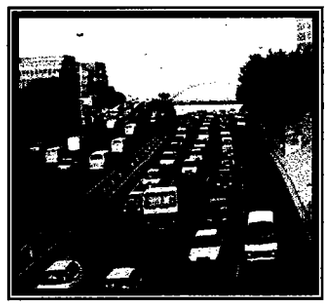


**Figure 4.2: Private Cars on Road System (1000's)
Peak Hour — Years 2005 to 2020
Trend vs Target**

As shown in Figure 4.2, the demand for private transport by car in the peak hour translates into a 'target' growth in cars of 31 000 as opposed to the 'trend' demand for an additional 100 000 cars.

Target growth in cars

4.3 Modal Split Monitoring



Modelled figures for total trips by mode throughout the municipal area are useful for establishing overall targets. However, for monitoring purposes measured modal split across cordons or screenlines is more effective. For this purpose the five kilometre screenline which intercepts the major roads in the municipal network is used.

Currently, in the peak two hour period, there are approximately 193 000 person trips inbound across the cordon and 87 000 outbound. The overall modal split is the same in both directions 54%:46% (public:private). The breakdown by mode however differs slightly as shown below: —

Table 4.2 AM Peak Period Modal Split — Year 2004 5 Kilometre Cordon (Inbound & Outbound)

Mode	% Person Trips by Mode	
	Inbound	Outbound
Taxi	30%	32%
Bus	18%	15%
Rail	6%	7%
Sub-Total Public Transport	54%	54%
Private	46%	46%
All Vehicles	**100%**	**100%**

The five year change in modal split is shown below, however, as rail figures were not available for the cordon in 1999, rail passengers have been assumed as constant from year 1999 to 2004.

Table 4.3 AM Peak Period Person Trips/Modal Split
Comparison 1999 vs 2004
5 Kilometre Cordon Inbound

Mode	Person Trips (1000's) / Modal Split	
	Year 1999	Year 2004
Taxi	56 (29%)	57 (30%)
Bus	45 (23%)	35 (18%)
Rail(1)	12 (6%)	12 (6%)
Private	83 (42%)	89 (46%)
	196 (100%)	193 (100%)

Note (1) Rail trips not available for Year 1999 therefore assumed the same as 2004

4.4 TDM Measures

Apart from TDM measures which are needed to reduce the demand for private transport there is a range of concomitant measures needed to retain current public transport ridership whilst attracting new riders from the private transport group. Certain measures are also needed to manage the extent and location of demand for freight transport movement. In many instances issues of system efficiency, effectiveness, safety, affordability and sustainability under-score the need for effective TDM measures. This section considers various types of interventions and measures, the objective of each and the applicability of each in the short, medium and long term. In the following tables the short term period is defined as 1-5 years, medium term 6-10 years and long term 11-20 years. Many of the measures will be introduced on a phased basis and often extend over more than one period. In each case the first period of introduction is shown in the table.

The measures are tabulated in four main categories, these being: —

(1) Private transport, which includes congestion reduction and parking measures

(2) Public transport, which also embraces the development of non-motorised transport

(3) Land-use development and management

(4) Policy and institutional, which relates to one or more of the other categories.

In many instances individual strategies could be allocated to more then one category however for simplicity they have been restricted to one only.

4.4.1 Private Transport Measures

Table 4.4 contains measures used to improve system performance, reduce need to travel particularly during peak periods and various restrictive measures which would result in a reduction in travel by private transport.

The restrictive interventions are directed towards active discouragement of the use of private cars. If such interventions are not to be unduly restrictive they must be accompanied by provision of attractive public transport alternatives as discussed in 4.4.2 Public Transport Measures.

4.4.2 Public Transport Measures

Table 4.5 contains a range of measures directed towards improving the public transport system and services in order to provide a more attractive service to current riders and to encourage existing private motorists to use public transport. Generally, attracting the private motorists onto public transport would also require a variety of disincentives directed at the motorist such as those identified under the private transport measures.

The public transport measures include physical infrastructure projects for public transport priority, fleet upgrades for all modes to acceptable standards, safety and security measures and the effective promotion of public transport across all income groups.

In recognition of the need for a holistic approach to public transport a range of measures focussed on providing where practical, an adequate system for non-motorised transport (pedestrian and cycling) have also been integrated.

Selectively and effectively integrated with measures in the other categories, these public transport initiatives introduced at the appropriate time, have potential for a significant impact on the reduction of the trend growth in demand for private transport. Further, such initiatives begin to give effect to the overall transport policy of prioritising public transport over private transport.

4.4.3 Land Use Development and Management Measures

Land use plays a key role in the location and demand for various forms of transport. Table 4.6 identifies measures which in effect are land use planning and development guidelines encouraging and supporting efficient transport in a city, with the focus on public transport.

4.4.4 Policy and Institutional Measures

Table 4.7 identifies several measures which address the key issues of appropriate institutional arrangements, regulation of transport, pricing, cost recovery and preservation of valuable transport assets.

Table 4.4 Private Transport Measures Implementation Timing

TDM Measure	Description	Objectives	Implementation Timing		
			Short Term	Med Term	Long Term
Area Traffic Control system	The use of computerised signal control systems to manage traffic flows	To optimise traffic flows through signal systems and minimize congestion and related pollution and cost inefficiencies	√		
Intelligent Transportation Systems	Use of information technologies to provide the driver with real time information and/or instructions to avoid problem locations etc	To improve system performance, reduce congestion and unnecessary travel			√
Alternative work schedules and flexitime	Compressed work week (CWW) and staggered shifts, starting/ ending outside of peak periods and/or allowing employees to work flexitime	To reduce demand for travel in peak periods and in particular the peak hour		√	
Telework (Telecommuting, distance learning, tele-shopping, etc)	Use of telecommunications as a substitute for physical travel	To reduce need for travel for work and business purposes both in and out of peak periods			√
Ridesharing	Ways to support and encourage carpooling and vanpooling	To reduce private vehicles on the road system in peak periods			√
Vehicle use restrictions	Regulatory strategies to limit private vehicle travel at a particular time and place	To limit use of private transport in selected areas of the city in particular during peak periods		√	
Limited road development	Allow traffic to increase and congestion to grow in selected areas	To encourage peak spreading, use of public transport and reduction in trend growth of public transport in selected areas		√	

Area access taxation	Drivers entering defined restricted areas of city pay an access tax	To limit private transport use in defined areas of city whilst raising funding for transport system, preferably public transport			√
Road pricing	Congestion pricing, value pricing, road tolls and HOT lanes	To recover cost of road infrastructure from the users		√	
Distance-based pricing	Charge insurance, road use fees, emission charges and taxes based on a vehicle's kilometres	To reduce use of private transport			√
Fuel taxes	Increase fuel taxes	To fund roads and public transport and reduce demand for private transport		√	
Parking management	Methods for more efficient use of parking	To make best use of available facilities	√		
Parking cost, pricing and revenue planning	Parking facility cost recovery pricing and revenue generation planning	To prepare a comprehensive parking revenue programme, considering cost of providing facilities	√		
Parking taxation	Drivers wanting the right to park in defined restricted areas of city pay applicable tax for that area	To limit private transport demand for parking in defined areas of city whilst raising funding for transport system; preferably public transport			√
Shared parking	Shared parking facilities among multiple users	To maximise utilization of facilities		√	

Table 4.5: Public Transport Measures

TDM Measure	**Description**	**Objectives**	**Implementation Timing**		
			Short Term	**Med Term**	**Long Term**
HOV (High occupancy vehicle) priority	Priority measures focused on public transport vehicles	To reduce public transport (PT) travel times and give PT noticeable advantage over private transport in congested areas thereby encouraging use of public transport		√	
Re-routing around congested areas	To identify points of congestion along PT routes and identify alternative routing where practical if priority facilities cannot be introduced	To reduce travel times without reducing accessibility	ssss √		
Optimised configuration of public transport ranks and holding areas	Rationalise location and use of ranks in congested areas of the city	To reduce congestion by reducing unnecessary loading/holding as well as movement of PT vehicles in congested areas	√		
Provision for non-motorised transport	Plan and implement localized, safe and effective walking and cycling facilities integrated into other modes of public transport where justified by current and l atent demand and where physically practical	To minimize the cost of transport for the urban poor where possible and provide flexibility in transport options	√		

Non-motorised facility management	ractices for managing and maintaining non-motorised facilities such as walkways, sidewalks and cycle paths	To ensure facilities provided are well maintained and remain safe attractive options to the user	√		
Upgrade of PT system	Ensure availability of the appropriate mode of public transport for an efficient, user attractive PT system	To provide a cost efficient, attractive PT system which will retain the support of current ridership and encourage new riders from the current private transport group		√	
Upgrade of PT fleet	Investment in fleet to ensure all modes (rail, bus, taxi) operate with equipment to defined standards	To provide a safe, efficient and attractive public transport service	√		
Park & Ride facilities	Park 'n ride facilities at key locations inter-faced with prioritised public transport services through congested areas	To encourage private motorists to change to prioritised public transport through congested areas where use of private transport may be discouraged by a variety of measures		√	
Address security concerns	Improved personal safety for walking, cycling, and public transport	To increase the attractiveness and sense of security on all public transport modes throughout the city	√		
Road space reallocation	Roadway design and management practices	To encourage design and management practice which Improves the efficiency of PT operations		√	
Promotion of public transport	Package and market public transport and develop effective user information systems	To raise the profile of public transport and public awareness of PT benefits and achievements as well as increasing user-friendliness of PT	√		
Area Traffic Control system	The use of computerised signal control systems to manage traffic flows incl. possible priority treatment of PT	To minimise delay for PT vehicles		√	
Intelligent Transportation Systems	Use of information technologies to provide the PT drivers with real time information and/or instructions to avoid problem locations etc	To improve PT system performance			√

Table 4.6: Land Use Development Management Measures

TDM Measure	Description	Objectives	Implementation Timing		
			Short Term	Med Term	Long Term
Location Efficient Development	Locate different categories of development where accessibility and mobility needs can be effectively met	To ensure people access, with emphasis on public transport, as well as freight and commercial access and mobility needs can be met by safe, cost effective transport systems		√	

Development densification in support of public transport	Incentives for densification at identified public transport Nodes and along priority corridors	To increase convenience, effectiveness and cost efficiency of public transport system			√
Public transport dependent development closer to major trip attractors	Residential development on subsidised land closer to major employment areas, and highly accessible to public transport	To reduce cost of travel and cost of providing effective, efficient public transport		√	
Car free districts and pedestrianised streets	elected areas and times of Sminimal private vehicle use	To humanise selected key areas of city and reduce negative impact of private transport on these areas			√

Table 4.7 Policy and Institutional Measures

TDM Measure	Description	Objectives	Implementation Timing Short Term	Med Term	Long Term
Prioritising appropriate transportation measures	Policy which prioritises public transport in the transportation system and TDM measures which minimize the negative impact of private transport on the urban environment	To encourage use of public transport and minimize the negative impact of transport on the city whilst ensuring mobility and accessibility for all stake-holder groups	√		
Regulatory reform	Policy changes to encourage regulated competition, innovation, safety and efficiency in transport systems and services	To regulate all categories of transport services to increase accessibility to safe, cost-efficient, environmentally sensitive, sustainable transport systems and services for all stake-holder groups		√	
Institutional reforms	Development and support of appropriate institutional structures and processes of all stake-holder groups	To provide structures that can promote and deliver sustainable, efficient transport systems and services meeting the needs	√		
Comprehensive market reforms	Policy changes that result in more efficient and fair transportation pricing	To promote user pays principles whilst increasing transport affordability and accessibility to the poor and ensuring cost efficient freight transport		√	
Asset management	Policies and programmes to preserve valuable assets transport	To maximise utility of existing assets that support effective, efficient sustainable	√		

4.5 eThekwini's Transport Management Strategy

The ETA's TDM strategy comprises a series of projects defined within the context of various possible measures that could be implemented in the short, medium and long terms (section 4.4).

Although the transportation planning process has identified a range of short to long term projects in the various aspects of public and private transportation, the ETA's TDM strategy focuses on those projects that should be initiated in the short term period, years 1 to 5. These form a part of the prioritised implementation programme in the ITP.

The following projects comprise the TDM strategy for the eThekwini area:

1 The current contract for upgrade and expansion of the area traffic control system (ATC) which provides real time traffic control in central Durban. This system optimises traffic flows and reduces congestion and related pollution. **ATC uptrade**

2 A parking investigation to consider more efficient use of available parking facilities and develop a comprehensive parking revenue/cost recovery programme, taking into consideration the cost of providing and maintaining facilities. **Parking investigation**

3 An investigation to identify congestion locations along the public transport routes and evaluation of possible options for bypassing the location or introducing some form of PT priority measure to overcome the congestion or reduce the impact thereof. **PT congestion alleviation**

4 A pilot study for introducing and monitoring the impact of upgraded public transport security at selected rank (s). **Pilot: PT rank security**

5 CBD prioritised public transport distribution system. This system introduced on a phased basis would interface with the various major bus, rail and taxi services to the CBD. Public transport priority lanes and priority intersection control using SCOOT would also be accompanied by CCTV linked monitoring and enforcement. **PT priority distribution in the CBD**

6 A pilot project for a cycling 'system' from Clermont to New Germany/Pinetown comprising cycle paths/routes and terminal infrastructure. **ATC uptrade**

7 Phased implementation of taxi and bus rank rationalisation in Durban's Warwick Avenue area; developing towards a partial or total consolidation of bus and taxi activity in a multi-level Berea station transport interchange. **Warwick Ave taxi/bus rank rationalisation**

8 Modernisation of bus/taxi fleet. Modern reliable buses are required in all new bus service contracts. In future expanded areas of the public transport system will be provided in terms of service contracts. As this happens not only buses but also any taxis providing service within these contracts will have to meet certain fleet standard specifications. Apart from the requirement of contracts for modern, safe equipment the implementation of the Taxi Re-capitalisation programme will result in the progressive modernisation of the taxi fleet. These processes will undoubtedly result in fleet modernisation on an ongoing basis commencing in the short term. **Bus/taxi fleet modernation**

9 Rail system and service upgrade. This is at the heart of eThekwini's public transport strategy and could extend from the short term through to the long term programme. As a part of the TDM strategy the ETA will continue to pursue investment in the rail system and infrastructure either through national funding or some form of concession agreement. **Rail system upgrade**

10 Co-ordinated, integrated feeder services to rail. This will consist of a pilot project to initiate a taxi and/or bus feeder service to rail combined with integrated ticketing and appropriate station upgrade if required. This pilot location will be selected from one of the following: — **Integrated feeders to rail**

- one of the Umlazi stations
- KwaMashu/ Ntuzuma to one of the KwaMashu spur line stations
- Maydon Wharf/Bayhead/Island View to Congella station
- Jacobs/Clairwood to Montclair station
- Prospecton to Isipingo station

11 Although not a project as such, policy has been developed for this first ITP giving priority to public tranport in the planning and development of the transportation system and in support of appropriate TDM measures to minimise the negative impact of private transport on the environment. **Policy supporting public transport**

Completion of pilot projects will undoubtedly give rise to other projects with some of these being incorporated into the TDM strategy at a later stage in the planning process.

4.6 Congestion Monitoring

Whilst various types of TDM measures are effective in reducing congestion, questions arise around the level at which congestion is unacceptable possibly requiring various types of TDM measures or further investment in public transport or roads infrastructure.

Further questions related to the above are: —

- What criteria or indices should be used to measure congestion?
- What levels of congestion should be acceptable for different parts of the city (urban/rural) taking into consideration dependency on internal road freight movements. **Investigation of current local practice and o/s**
- What should targets and related policy be in regard to congestion for these various conditions including issues related to greenhouse gases and carbon emissions.

These questions formed the basis of an investigation conducted by eThekwini Municipality of international and South African practice.

Whilst various criteria were identified in research and by respondents, no benchmark values were given with the exception of one major city in South Africa identifying level of service (LOS) D as their basis for considering an upgrade of existing facilities.

eThekwini Municipality currently conduct a regular comprehensive programme of traffic counts as well as travel time surveys. Using this data the Municipality monitors LOS, volume/capacity (V/C) and travel time on different elements of the major road network and to a lesser degree the minor road system. Currently eThekwini also use LOS D as the basis for an acceptable level of congestion in peak conditions. **eThekwini approach**

5 PUBLIC TRANSPORT

This section of the ITP addresses matters of public transport based on the Public Transport Plan for eThekwini Municipality, which is a self-contained separate document.

It contains the following aspects of the PTP: —

- Public Transport Policy
- The headline results of the recently completed Current Public Transport Record (CPTR).
- Summary results of the Operating Licence Strategy (OLS) which comprises service and licence changes responsive to current supply and demand requirements, taking into consideration the longer term public transport system strategy.
- The longer term public transport strategy and associated implementation plan which reflects the Municipality's policies for public transport.
- The key performance indicators (KPI's) related to each of the public transport goals for monitoring performance on the delivery of the PTP. **Content**

5.1 Public Transport Policy

Public transport policy is documented within the context of the overall goals for transport in eThekwini Municipality, as set out in Section 5.2. They are the following: —

Overall tranport goals

1. Effective Transport
2. Efficient Transport
3. Sustainable Transport
4. Safe & Secure Transport
5. Black Empowerment

5.1.1 Policy for Effective Public Transport

This policy is based on promoting public transport over private transport and developing a system with services which are customer-focused and needs-driven. Recognising the differences between the needs of urban and rural areas, different standards of service will be used to provide appropriate, affordable levels of access to opportunity for different segments of the community.

Within this context, ETA's public transport policy is the following: —

Accessibility & mobility needs

No.1 To identify and prioritise accessibility and mobility needs in terms of market segments, based on categories defined in NDOT's Moving South Africa (MSA) Report.

In keeping with international best practice to promote the upliftment of the urban poor by increasing their accessibility to economic and social opportunity, through improved public transport, the ETA's policy is: —

PT over private transport

No. 2 To promote public transport over private transport.

Affordable standards

No.3 To provide an affordable, sustainable PT system in response to the prioritised needs of the market segments, acknowledging the importance of accessibility to social, economic, educational and recreational opportunities, but recognising it is unaffordable to provide the same level of service to users in urban and rural areas.

In the rural areas access to employment, the transport needs of learners, and access to health facilities will be prioritised.

For public transport to be needs-driven and customer-focused it must effectively place the commuter at the centre of public transport policy.

In this regard the ETA's policy is: —

Passenger Service Charter

No.4 To support and develop the capacity of the existing and future consultation structures and enable them to articulate the needs of the different passenger groups for incorporation into a Passenger Service Charter.

Special Needs Groups & Universally accessible corridors

No.5 To implement accessible public transport for Special Needs passengers through a combination of specialised services (eg. dial-a-ride) and universally accessible mainstream services where appropriate, subject to resource constraints.

To give effect to this the ETA will give direction to the SARCC on a programme for fleet upgrading as well as upgrading of rail stations and fleet to full accessibility standards within these corridors.

Rail Stations

No.6 To ensure that where appropriate new bus contracts have a minimum percent of fleet designed for special needs access, and all new fixed infrastructure is fully accessible.

Special Needs Fleet

Effective public transport must operate to acceptable standards in every aspect of its performance. Such standards defined by the ETA with input from the Community in terms of the passenger service charter (refer No. 4 above) must be subscribed to and enforceable on the operators providing the public transport services.

In this regard it is the ETA's policy: —

Quality Service Charter

No.7 To manage all modes of public transport service, within a Quality Service Charter which addresses, inter alia, matters of reliability, differentiated levels of service (coverage, hours of service, frequency) convenience and comfort, standards of operation, fare structures, communication and information services, vehicle age and servicing requirements and code of conduct for operator/driver behaviour.

Taxi Re-cap and age criteria

No.8 To support formalisation and re-capitalisation of the taxi industry and to apply various fleet age criteria to all future contracts (subsidised and unsubsidised) for all modes of road-based public transport vehicles.

5.1.2 Policy for Efficient Public Transport

Efficiency in public transport has many dimensions. It encompasses amongst others: —

- system and service efficiency which impacts on reliability and quality of service to the users
- cost efficiency which is necessary for sustainability.

• mode efficiency which requires the appropriate use of each mode, which may require some form of regulation and integration of services provided by the various modes in the system.

• Efficient inter-action of the transport/land use system which requires the two components to be complementary and mutually supportive.

For efficient public transport regulation of the modes in the system along with better standards of equipment and better systems of management of the overall public transport system are needed. In this regard, the policy of the ETA is: —

No. 9 To introduce regulation of all public transport services on a phased basis. **Regulation**

No. 10 To support the devolution of transport functions for all modes of public transport to the Transport Authority, including rail and bus contracts on a phased basis. **Devolution**

No. 11 To influence the roll-out of the Taxi Re-cap Programme in eThekwini Municipality once the programme has been finalised by NDOT. **ReE-cap roll-out**

Where new public transport operator licences are being issued there is a need to ensure existing operators in over-traded areas are given preferential consideration. In this regard ETA policy is the following: — **Aloocation new licenses**

No. 12 Preferential consideration will be given to existing operators in over-traded areas or operators adversely impacted by planned service alterations, when allocating new licences for new services introduced either through service changes resulting from restructuring or service requirements for a new development.

Duplication of services, particularly subsidised services, leads to inefficiencies and unnecessary subsidy expenditure. The following is the the ETA's policy in this regard: — **Service Duplication**

No. 13 To remove duplicate, subsidised services in direct competition. No new license applications will be approved where duplication exists except for the selected, preferred mode mix.

No.14 To allow for duplication where differentiated services are being offered.

As regards defining the role of each mode in the public transport system, the ETA's policy is: —

No.15 To position the modes within an integrated system on the basis of functionality and on the basis of the most cost-effective mode for corridor capacity requirements, using the following indicative guidelines: —

- rail: greater than 20 000 one way passengers per day **Role of models**
- bus: 500-30 000 (standard and 35 seater buses)
- taxi: should not be used for major corridors or long distance line-haul routes but rather for short distance routes and/or feeder type services

No.16 To facilitate public transport operator empowerment enabling operators to reposition in the industry and participate in tendered contracts. **Empowerment**

In terms of economic efficiency, the public transport system must operate with economic load factors, providing a sustainable system with an acceptable level of service for different periods of the day and days of the week. **Sustainable system**

In this regard the ETA's policy is: —

No.17 To reduce system costs and subsidy while providing an acceptable level of service to all sectors of the community.

No.18 To recognise the need for subsidy but to change the basis for subsidy from operator and system-deficit subsidy to targeted user-side subsidy which does not support and entrench long distance trips but addresses basic social needs of various groups in selected locations. **Sustainable system**

It is acknowledged that in the longer term subsidies need to be on a more equitable basis and available for all modes.

Notes: Any changes to the current subsidy system would need to be phased in with full consultation to minimise negative impacts during the process.

In respect of integration and co-ordination the ETA's policy is: —

No.19 To promote integration and co-ordination between all modes on a system-wide basis to achieve: — **PT Service integration**

- economies of scale
- reduced costs
- increased load factors

With regards to integration of land use and transportation, the ETA's policy is: —

No. 20 To promote infilling and densification along public transport corridors and major public transport routes within acceptable environmental limits.

No.21 To direct employment opportunities, mixed land use and high-density residential development into the high-utilisation public transport corridors, and nodes.

No.22 To discourage urban sprawl where public transport services are inadequate, including careful evaluation of any major trip-generating development outside the urban edge.

No.23 To promote Durban CBD and the South Durban Basin as two dominant nodes of transport in the strategic North-South Corridor. **P/T land-use integration**

No.24 To encourage re-development around stations and major mode interchanges in the form of major trip generating land use and informal and emerging economic activities.

No.25 To steer public investment for secondary schools, hospitals, clinics, police stations and various essential social services towards development nodes along significant transport corridors.

5.1.3 Policy for Sustainable Public Transport

The goal of sustainability is also multi-facetted and the ETA recognises the need for the public transport system to be: —

- financially sustainable
- technically sustainable
- socially sustainable
- environmentally sustainable
- sustainable in terms of access to adequate skills resources
- maintainable within the above considerations
- sustainable in terms of complimentary and self-reinforcing support between the public transport system and land use which assists in creating a stable investment environment

Policy 17 under Public Transport Efficiency applies equally to the goal of sustainability. Additional policy in respect of financial and economic sustainability is: —

No.26 To identify and promote private-public partnerships in matters related to the provision, operation, maintenance and monitoring of public transport systems, service and related facilities. **PPP's**

The ETA's policy to address the limitations of current funding, and the limitations of current legislation which restrict their ability to develop adequate dedicated funding are: — — **ETA Funding**

No.27 To apply user-pays principles where appropriate.

No.28 To support the most efficient mechanisms for raising funds.

The following policy applies in respect of expenditure on capital works and maintenance of the public transport system: —

No.29 To ensure capital works expenditure programmes do not compromise maintenance standards, by identifying and programming cycles of fleet and system recapitalisation and maintenance. **Capital ¶ Maintenance Expenditure**

No.30 To rationalise roles and responsibilities of institutional and administrative structures involved in funding of capital works and maintenance in order to reduce administrative costs.

Access to adequate skills resources for the planning and execution of the ETA's programme is an essential element of sustainability. In this regard the ETA's policy is: — **Skills Resource**

No.31 To support the broader IDP initiatives in capacity building and training, ensuring the requirements of transport are adequately met.

Social sustainability is supported by the following policy: — **Social Sustainability**

No.32 To ensure the user cost for services provided is affordable, within defined limits, for all sectors of the Community. In this regard, the intention is for the relevant authority to only approve applications for justifiable fare increases, for any mode, after due consultation.

No.33 To involve the community through user forums in considering various aspects of service provision.

Environmental sustainability has a number of aspects relevant to the ETA's public transport policy; these being: —

- the negative impact of transport on the physical environment which on a daily basis affects quality of life
- the longer term impact on atmospheric pollution

• the longer term impact on energy conservation

Within the above context the ETA's policy is: —

Public transport over private

No.34 To promote public transport over private transport through various measures including implementation of high occupancy vehicle (HOV) facilities. (Refer also No. 2)

NMT

No.35 To investigate phasing of appropriate car restraint measures.

No.36 To promote non-motorised transport (NMT) including walking and cycling.

No.37 To encourage and initiate investigations on use of environmentally friendly vehicles and energy.

No.38 To introduce energy efficient measures for transport operations and infrastructure.

5.1.4 Policy for Safety & Security in Public Transport

In respect of Safety, the ETA's policy will provide the framework for addressing safety in all aspects of the public transport system and operations which will also consider issues such as: —

• the integration of policy with appropriate Education, Engineering and Enforcement programmes as part of the ETA's Safety Plan

• tstandards of policing in rural and urban locations

• tenforcement of the operator/driver code of conduct and standards of service as per the Quality Service Charter

The introduction and enforcement of the Quality Service Charter (Policy No.7) will have a major impact on delivery of safe public transport. Further policy which will compliment the goal of safety is: —

Security

No.39 To promote passenger safety in respect of PT operations at ranks, terminals and on board PT vehicles.

As regards matters of Security, the ETA's policy is: —

No. 40 To ensure passenger security at ranks, terminal facilities and on board PT vehicles.

5.1.5 Policy for Black Empowerment in Public Transport

Equity

A major goal in the provision and operation of eThekwini's public transport and related services is the achievement of Black Empowerment.

The ETA's policy approach on Black Empowerment is: —

No.41 To support the City's goal of equity which will include: —

• creating opportunity for SMME's

• open tendering on any contracted PT routes

• structuring contracts and requirements for contractors to include PDI operator sub-contracts

• providing rules for contract adjudication in respect of PDI submissions

• empowering existing and potential entrepreneurs through training

• providing support in the process of raising finance within funding and legal boundaries (eg. guarantees for financing of vehicles)

• creating commercial investment opportunities

• creating infrastructure management opportunities/ contracts (eg. cleaning, security, rank management)

5.2 Current Public Transport Record (CPTR)

CPTR survey

A comprehensive CPTR has been prepared for eThekwini Municipality for the three hour am peak period (05h00-08h00) and where demand warranted the three hour pm peak period (15h30-18h30).

The CPTR data base of individual public transport routes with one or both ends in the eThekwini Municipal area provided the information needed to prepare the tabulations specified by the National Department of Transport. Further, this same data set provided the information used by the ETA in preparing the OLS for the Municipal area.

This section of the ITP is supported by the full CPTR report and schedules which are available from the ETA. The focus in the ITP is on overall summaries and broad strategies, the details being available in the support documentation.

5.2.1 Extent of Survey

The survey covered some 2 300km2 divided into eight areas as shown in Figure 5.1. Table 5.1 shows the total number of bus and taxi terminals by area that were included in the three hour am peak period survey from 05h00 to 08h00 and Table 5.2 shows the number of routes, including those which were not operating on the particular survey days.

Table 5.1: Bus/Taxi Terminal Points

Area	Terminals
A	35
B	25
C	81
D	96
E	70
F	118
G	130
H	77
TOTAL	**632**

Terminal points

The numbers of uni-directional bus and taxi routes in each of the eight areas is shown in Table 5.2.

Table 5.2: Bus and Taxi Route Summary

Area	Bus	Taxi	Total
A	233	244	477
B	123	70	193
C	67	236	303
D	104	259	363
E	308	363	671
F	272	115	387
G	281	284	565
H	241	159	400
Total	**1629**	**1730**	**3359**

Bus/taxi routes

In addition to the above, 8 basic rail routes radiating from Durban were also surveyed. In total there were 51 unique combinations of start and end stations and scheduled en route station/halt stops.

Rail routes

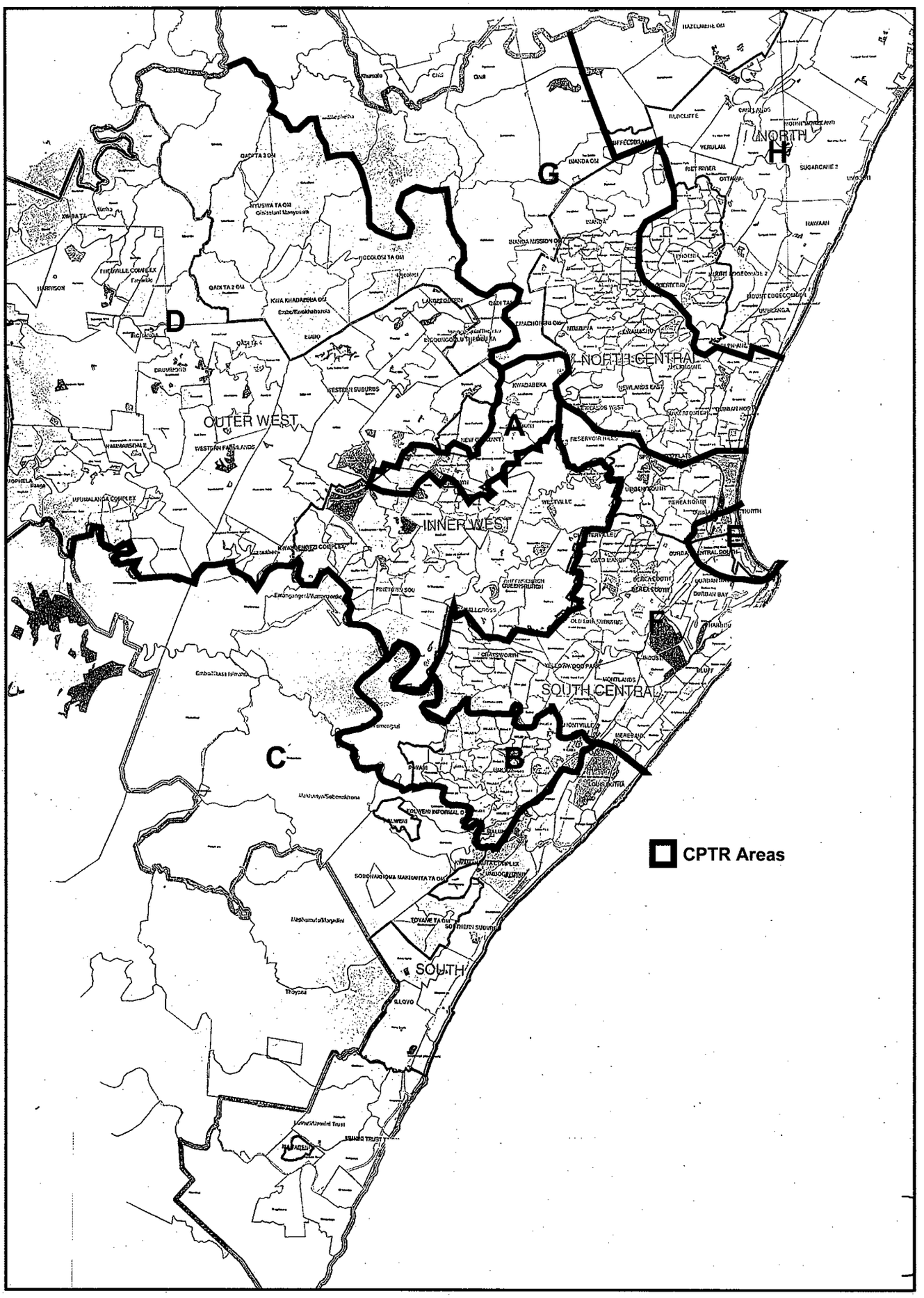


Figure 5.1:
eThekwini CPTR — Survey Areas

5.2.2 Content of Survey

All public transport routes are geographically defined in detail from point of origin to destination. These are logged on the Municipalities system which interfaces with their Public Transport Management System (PTMIS) developed to capture data and report on various aspects of current supply, utilisation and performance of the services forming part of the public transport system.

On the supply side information has been captured by mode and by route on: —

Supply-side information

- route location
- route length
- fare structures and timetables
- departure times from point of origin
- capacity

At terminals, ranks and selected holding areas information was collected and captured on: —

Terminal, ranks and holding areas

- layout and type of construction
- capacity
- amenities

On the demand side, information by mode and route was collected on: —

Demand-side information

- passenger loadings
- passenger queue times
- maximum vehicle accumulation

Using PTMIS this data was analysed to produce the tabulations required by the NDOT as part of the ITP. These are available as a separate document forming part of the full CPTR.

Strategic summaries of results are documented in 5.2.3 below.

5.2.3 Scope of Survey

The CPTR surveys accounted for the following: —

Scope of CPTR surveys

- 55 bus operators/associations
- 1630 bus routes
- 117 taxi associations
- 1730 taxi routes
- 630 bus & taxi terminal points

On the supply side all information was recorded and captured; on the demand side, not all routes were operational on the survey days and therefore not all routes have service and utilisation data.

5.2.4 CPTR Data Compilation and Summaries

The CPTR data compilation and summaries were carried out using eThekwini's Public Transport Management Information System (PTMIS). Using this software package the various tabulations required in terms of NDOT guidelines were prepared for the various modes, routes and services. These are contained in the full CPTR report in the annexures on CD).

5.3 Metered Taxi

5.3.1 Introduction

Apart from the CPTR study which covered the major commuter transport modes of minibus taxi, bus and rail, an investigation was also conducted into metered taxi services. The full report is available in the annexures on CD.

Metered taxi

Although in South Africa metered taxis are not a commonly used form of transport by the local population for a variety of reasons the industry in eThekwini is nonetheless well established and performs an essential role in the transportation of both residents within and visitors to eThekwini. The function of metered taxis within the municipal transport system, however, is not clearly defined and the institutional structure of the industry on all levels is fragmented.

This section of the ITP looks at the current status of the metered taxi industry. In addition, the framework for developing policy and strategy are considered, which will assist in positioning the industry to perform effectively in serving future demand, in particular extraordinary demand from events such as the 2010 Soccer World Cup.

5.3.2 Size of eThekwini Metered Taxi Industry

Size of metered taxi industry

There are approximately 150 metered taxi operators in eThekwini that operate some 400 metered taxis. The size of the operations varies considerably from the largest with a fleet of 45 taxis to the single vehicle owner-driver. The South African Metered Taxi Association (SAMTA) has approximately 80 operators as members, the Thekwini Africa Metered Taxi Association (TAMTA) has

approximately 70 operators as members and the Durban Metropolitan Taxi Association (DMTA) has approximately 70 operators as members. Some operators are members of more than one of the three associations.

It is difficult to obtain the metered taxi fleet size in eThekwini as the available data on vehicle accreditation permits is outdated and not reliable and the available data on rank permits is listed by permit and not by vehicle. Taking into consideration the fact that one vehicle can operate on two or more rank permits, it is estimated that the total legal metered taxi fleet in eThekwini is 400 vehicles.

There are an estimated 60 permanent taxi drivers who do not have permits but are known to operate in the Inner City area. There are also moonlighters that operate mainly at night and target the low end of the market. No surveys of these taxis without permits or the illegal taxis have ever been undertaken and therefore the exact numbers are difficult to estimate.

5.3.3 Metered Taxi Routes and Operations

Routes & operations

The metered taxi industry provides a 24 hour service throughout the week in eThekwini. The companies with larger vehicle fleets use their vehicles on a 24-hour basis with drivers working 12-hour shifts. The smaller operators, who have one dedicated driver per vehicle, and owner-drivers also work a 12-hour day but their time is flexible to the market they serve and also changes according to seasonal demands. The off-peak period across all market sectors including seasonal demands is from 02:00 to 06:00 in the morning.

The most popular metered taxi return routes in eThekwini are listed as follows: —

Route No.	Origin	Destination	Distance	Time Period
1	CBD	Durban International Airport	20km	08h00 — 19h00
2	CBD	Pavilion Shopping Centre	12km	08h00 — 19h00
3	CBD	Gateway Shopping Centre	14km	08h00 — 19h00
4	CBD	Berea / Overport	7km	08h00 — 22h00
5	CBD	Sun Coast Casino	5km	08h00 — 00h00
6	CBD	Internal within CBD	5km	08h00 — 02h00
7	CBD	Residential Suburbs	ave 25km	22h00 — 04h00

Route 1: business and tourist markets

Route 2: private and tourist markets

Route 3: private and tourist markets

Route 4: private and tourist markets

Route 5: private and tourist markets

Route 6: private and tourist markets

Route 7: private and shift workers during weekdays, leisure over weekends

The average flag fall fee is R5-00 whilst the average fee per kilometre is R7. In most cases fees are negotiable to be discounted or as a flat fee.

5.3.4 Ranks in eThekwini

Metered taxi ranks

There are a total of 50 designated formal metered taxi ranks in the Inner City area containing about 150 bays. Approximately 5 of these ranks, mostly located outside former night clubs are no longer used due to the closure of the clubs. There is also a major rank at Durban International Airport that contains 8 bays. Most of the Inner City ranks are on-street parking areas that have been designated as metered taxi ranks. None of the metered taxi ranks have shelters or ablution facilities.

5.3.5 Policies and Strategies

Although these are no formal national policies or strategies for the metered taxi industry various papers and reports have been prepared by the Metered Taxi Working Group, a sub-committee of the National Taxi Task Team, which has been active since 1996.

These include: —

• "The Metered Taxi: Problems and Solutions

Preparation for Provincial Workshops — June 1996"

• "Supplementary Final Recommendations relating to

Metered Taxis — May 1997"

• "Report and Recommendations on 4+1 Vehicles — May 1997"

In addition to this, the National Department of Transport produced a "Position Paper on the Regulation and Democratisation of the Metered Taxi Industry" in October 2002. This paper made recommendations on the following: —

- National registration and democratisation of the metered taxi industry
- Clear definition of the services rendered by the metered taxi industry
- Law enforcement
- Legislative amendments
- Arrangements for a national summit or indaba of all role players to initiate the representation process.

Context for developing policy & strategy

To date, apart from legislative and regulation amendment initiatives at both the national and provincial level none of the institutional or operational recommendations have been formally implemented although a few of the issues have been addressed in eThekwini and possibly other provinces.

The KwaZulu-Natal Department of Transport at present does not have any policies or strategies for the metered taxi industry; however, a Provincial Bill has been approved by the KwaZulu-Natal cabinet, which gives the Minister of Transport the power to restructure all modes of land transport including metered taxis. The public consultation phase for this Bill is about to be initiated, following which it will be tabled before Parliament by the Minister. The KwaZulu-Natal Department of Transport has also just appointed a consortium of consultants to formulate Provincial regulations that will govern the metered taxi industry.

From the above, the current initiative by KZN-DOT to formulate a legal framework to accommodate new policies and strategies for the metered taxi industry and the National Department of Transport initiative to arrange a summit or indaba for all role players, will provide important background for the preparation of a policy document for metered taxi operations in eThekwini Municipality.

5.4 The ETA's Public Transport Strategy

5.4.1 Background

Against the background of seriously escalating public transport subsidies country-wide, associated with decreasing levels of public transport services standards, the National Department of Transport (NDOT) in 1999 initiated "the Fundamental Restructuring of Durban's Public Transport System" as a flagship project. This project, in line with national policy, was aimed at developing the most cost effective public transport system strategy for the existing and future metropolitan area, providing a quality system with levels of service similar to or better than current service levels. An associated spatial strategy to support public transport was developed.

This section describes: —

- key characteristics and issues around the existing public transport system
- alternative system strategies investigated
- the recommended system and modal strategy

The Operating Licence Strategy (OLS) needed to give effect to the implementation of the recommended system is discussed in Section 5.5.

Existing PT system

5.4.2 The Existing Public Transport System

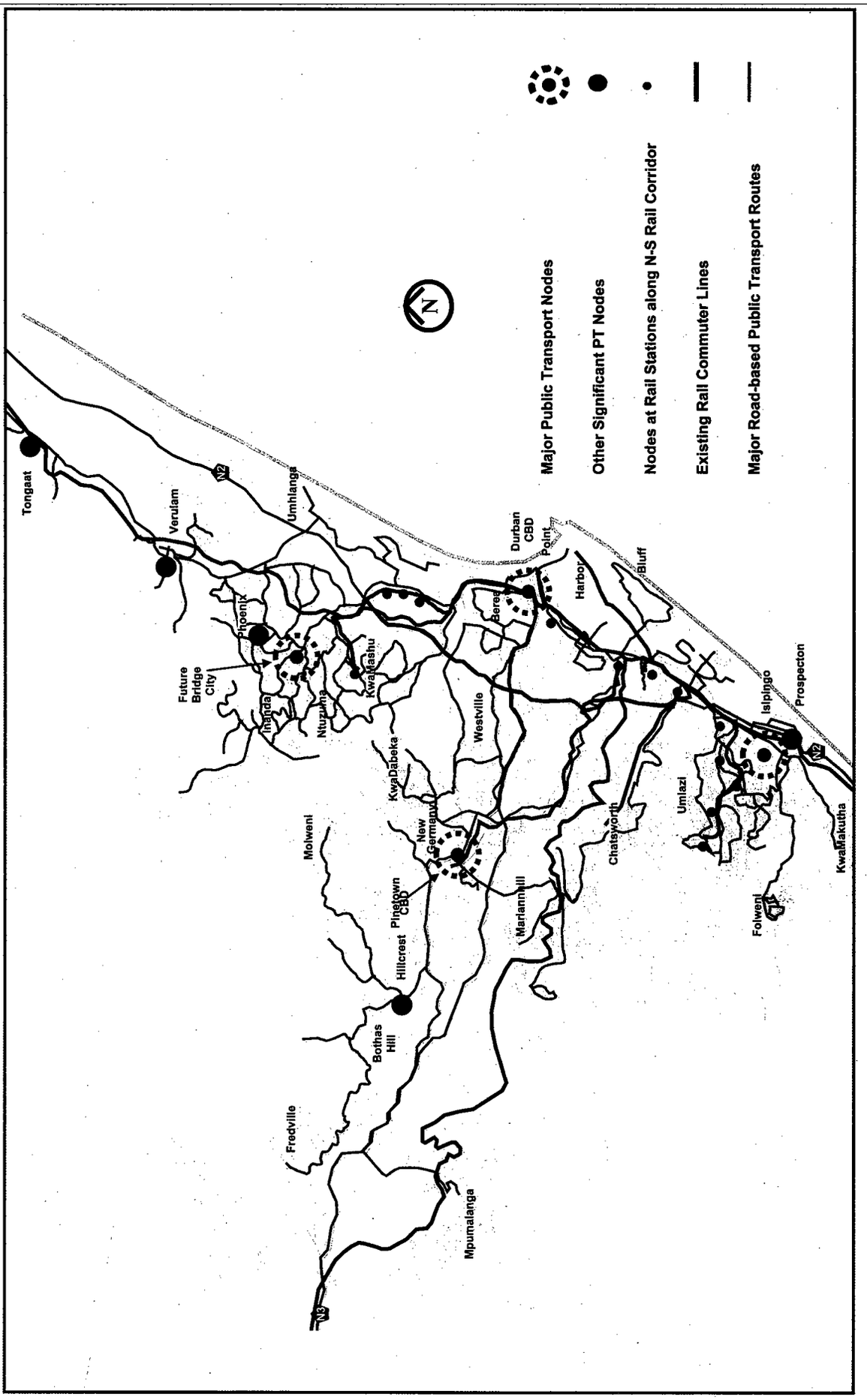
5.4.2.1 System Description

Figure 5.2 shows the existing system of public transport nodes and services.

The commuter rail system comprises the following: —

Rail system

- A north-south line following the coast from beyond the limits of the metro area to both the north and south.
- The mainline into the hinterland which carries commuters within the metropolitan area.
- A circuitous line between Pinetown CBD and Rossburgh Station on the north-south line.
- Three spur lines into the major residential areas of Umlazi, Chatsworth, and KwaMashu.
- A spur line along the south side of the harbour to the lower Bluff which is largely undeveloped.
- A section of single line adjacent to North Coast Road, parallel to the main north-south line.



eThekwini Transport Authority — Integrated Transport Plan 2004/2005

Figure 5.2:
Existing Public Transport Nodes and Services

The taxi and bus major route system provides extensive coverage throughout the metro area including services parallel to and in direct competition with most of the rail services. In most locations the bus and taxi services follow similar routes except in the Outer West, west of Pinetown. In these areas most of the routes are taxi routes with limited or no bus service, with the exception of bus service to Mpumalanga from Durban and the Pinetown areas.

Bus/taxi system

The metropolitan area has four major public transport nodes with a number of other nodes of local significance. The major nodes are located at: —

Major nodes along N-S corridor

- Isipingo in the south
- Durban CBD
- Bridge City to the north (development pending)
- Pinetown to the west

Isipingo in the south and Bridge City (which is a key future transport node in the north) define the limits of the major north-south coastal public transport corridor. Durban CBD located in the middle of this corridor is a major attractor for trips from both the north and the south.

The last major node is Pinetown Central which is largely a hub for services from the Outer West and industrial and residential areas to the south of Pinetown central and to the north-east.

Pinetown node

Although Pinetown is a major node it is not connected by a major corridor to any other node of significance. Consequently, the only corridor carrying sufficiently high volumes of commuters to be defined as major public transport corridor is the north-south coastal corridor between Isipingo in the south and Bridge City in the north.

Other public transport nodes of significance include: —

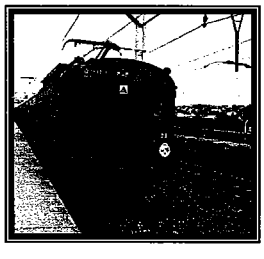
Other significant nodes

- In the south
  - — Prospecton, an industrial area immediately south of the Isipingo node
- In the west
  - — Hillcrest which is becoming a sub-regional centre
- In the north
  - — Phoenix town centre
  - — Verulam with a significant concentration of bus and taxi activity
  - — Tongaat also with a major concentration of bus and taxi activity
  - — the developing node around the Umhlanga town centre

5.4.2.2 Rail System, Service Characteristics and Issues

The existing rail system is characterised by decreasing levels of service and high levels of subsidy support, which is currently provided by the National Department of Transport. Rolling stock is dilapidated and train sets that become unsafe have to be removed from service. Parts of the signal system are antiquated and raise concerns over reliability of efficient operations.

Declining rail system



Many of the eight rail lines operate with low passenger loads and are deemed to be economically inefficient and in some instances, such as the Pinetown line are not well located to provide a reasonable service for the major passenger origin-destinations.

The major issue around rail is the real possibility of a shut down of all parts of the system unless there is a major investment in the system either through existing institutional structures or through some form of concession.

5.4.2.3 Bus System, Service Characteristics and Issues

The existing bus service on a system comprising some 1 400 uni-directional routes is provided by approximately 200 operators in a mix of subsidised contracts and unsubsidised services provided in terms of the operator route permits.

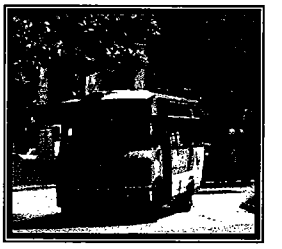
Currently there are seven bus contracts covering approximately 70% of the metropolitan route system. Some 170 unsubsidised bus operators in thirteen associations along

with approximately 20 independent operators provide service on the remaining 30% of the route system. At this time there are no unsubsidised commercial contracts.

Bus service issues

Over recent years efforts to contain rapidly escalating subsidy accompanied by reducing levels of service have been addressed in part by formal subsidised bus contracts. The most recent of these is the privatisation of Durban Transport which accounts for over one third of the bus fleet in the metro area operating on approximately half of the bus routes.

Outside of subsidised service contracts operators experiencing decreasing ridership and profit margins are unable to upgrade their fleet and struggle to maintain service levels with aging vehicles.



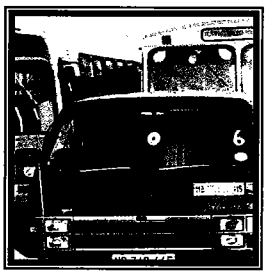
Major issues around the bus system and service are that bus and rail services operate in direct competition; unsubsidised bus services are deteriorating and many bus trips operate with low passenger loads even in peak periods.

5.4.2.4 Taxi System and Service Characteristics and Issues

There are approximately 120 taxi associations serving the municipal area and on completion of the provincial taxi data base an accurate figure for the number of operators will also be known. The CPTR update currently in progress will also provide data on number of routes and peak direction passenger loading.

Taxi service issues

Generally the taxi industry operates in direct competition with bus and rail service throughout the metro area. Peak passenger loads on most routes are high although not always over the full extent of the journey. In some areas indications are that over-trading has resulted in associations operating with split schedules whereby different operators provide the service on different days of the week. This has the effect of keeping passenger loading at a reasonably high level.



Notwithstanding the high passenger loads the unsubsidised taxi industry does not generate profit margins that support fleet replacement. Most of the fleet is old and breakdowns are frequent. Safety is a major concern.

In a number of areas the taxi associations 'roster' their operators who in terms of some form of schedule operate at different times on a combination of lucrative routes and low profit routes. On this basis association members are assured of their fair share of the potential fare revenue.

Issues around the taxi system and service relate to the overall deterioration of the taxi fleet, resulting in reduced safety and reliability of service, over-trading in some areas which results in below average profit levels and association competition for new routes or service which often leads to aggressive confrontation and violence. Ongoing competition with subsidised public transport services also reduces the profitability of subsidised services (bus and rail). This causes pressure for increased subsidy in future bus contracts.

5.4.2.5 Combined System Issues

Overall the public transport system is economically inefficient with many services in direct competition with each other resulting in unprofitable rail and bus trips and in some instances taxi trips.

PT system issues

Generally, apart from subsidised bus contracts, the rail, bus and taxi service fleet is in an advanced stage of deterioration with no signs of significant investment in new fleet in the short term future. Consequently, service levels are dropping and public transport patronage is reducing.

Against this background proposals have been developed to rationalise and restructure the public transport system and services in order to address the fundamental issues highlighted in this section. The systems tested and the adopted recommended system are described in the following section.

5.4.3 Public Transport System Proposals

5.4.3.1 Introduction

PT system proposals

This section, against the background of issues highlighted in Section 5.4.2, sets out the public transport proposals for a system strategy which rationalises and restructures the existing inefficient supply-driven system, in terms of the policy guidelines documented in Section 3 of this Plan.

The focus is on providing a passenger orientated, demand-driven, economically efficient and integrated system.

This section describes the recommended public transport system which has an emphasis on the major north-south coastal corridor.

This corridor is the dominant feature of the public transport system best serving the development in the metropolitan area. It is supported by a number of spatial strategies which were defined by some of the departments of the City.

5.4.3.2 Alternative Public Transport Systems Tested

The process of determining a recommended public transport system for the eThekwini Municipal area included the testing of ten alternative strategies. These were based on making best use of one of the three principle modes of rail, bus and minibus taxi. The bus mode included use of articulated bus, standard bus and midibus. Minibus taxi services were based on the larger 18 seater minibus taxi as originally proposed by the National Government's use of Recapitalisation Programme.

Alternative PT systems tested

Each alternative was a variation on one of the main mode themes. In each case the principle mode was made to work as effectively as possible with an optimised support system from the other modes. In some alternatives the services were planned to operate on dedicated right-of-way in the most heavily trafficked north-south coastal corridor. In that corridor various options existed between the use of rail and articulated buses operating on dedicated right-of-way (busway) within the existing rail reserve. These services were supported by tailored feeder services with different mode options.

The system serving other corridors of lesser demand was defined either in terms of rail service on existing rail lines or some combination of bus and taxi on the road system. In the alternative with a busway in the north-south corridor bus service could operate with articulated buses on routes that extended beyond the busway, depending on the location and demand. Feeder services included use of either taxis or midibus, depending on demand.

For purposes of the strategic analysis, other areas of the public transport system, outside of significant demand corridors, were based on use of the minibus taxis and standard buses, although at the level of detail of service planning, service options would also consider midibus and articulated bus modes.

The alternatives tested fit within one of three groups: —

1. The existing system of rail, bus and taxi routes with services optimised.
2. Systems with no rail service and an emphasis on bus with a busway operating in the heavily trafficked north-south coastal corridor.
3. Systems with an emphasis on rail, supported by feeder services.

In developing this wide spectrum of alternatives, the intent was to explore a range of alternatives from a limited intervention solution through to extreme options.

5.4.3.3 The Proposed System

The proposed public transport system for the eThekwini municipal area (Figure 5.3) is based on: —

• Use of the most appropriate public transport modes for service effectiveness and cost efficiency in each part of the system.

This interprets into rail providing service in the heavy demand north-south coastal corridor between the transport interchange node at Bridge City in the north and a similar node at Isipingo in the south. The implication of this strategy would be to extend the commuter rail line from Duff's Road Station to Bridge City a distance of approximately three kilometres. Existing spur lines from the north-south line into the residential areas of Umlazi in the south and KwaMashu in the north would form a part of this corridor.

Proposed PT system

• Relocation of road-based public transport services in direct competition with rail in the high volume north-south coastal corridor.

This interprets into a number of subsidised bus as well as unsubsidised bus and taxi services being relocated or removed from the system, in a phased process using procedures from the City's policy framework.

• Where appropriate, the retention/upgrading of rail supported by integrated feeder systems, in the lower demand corridors, where service and cost benefit analyses justify such systems.

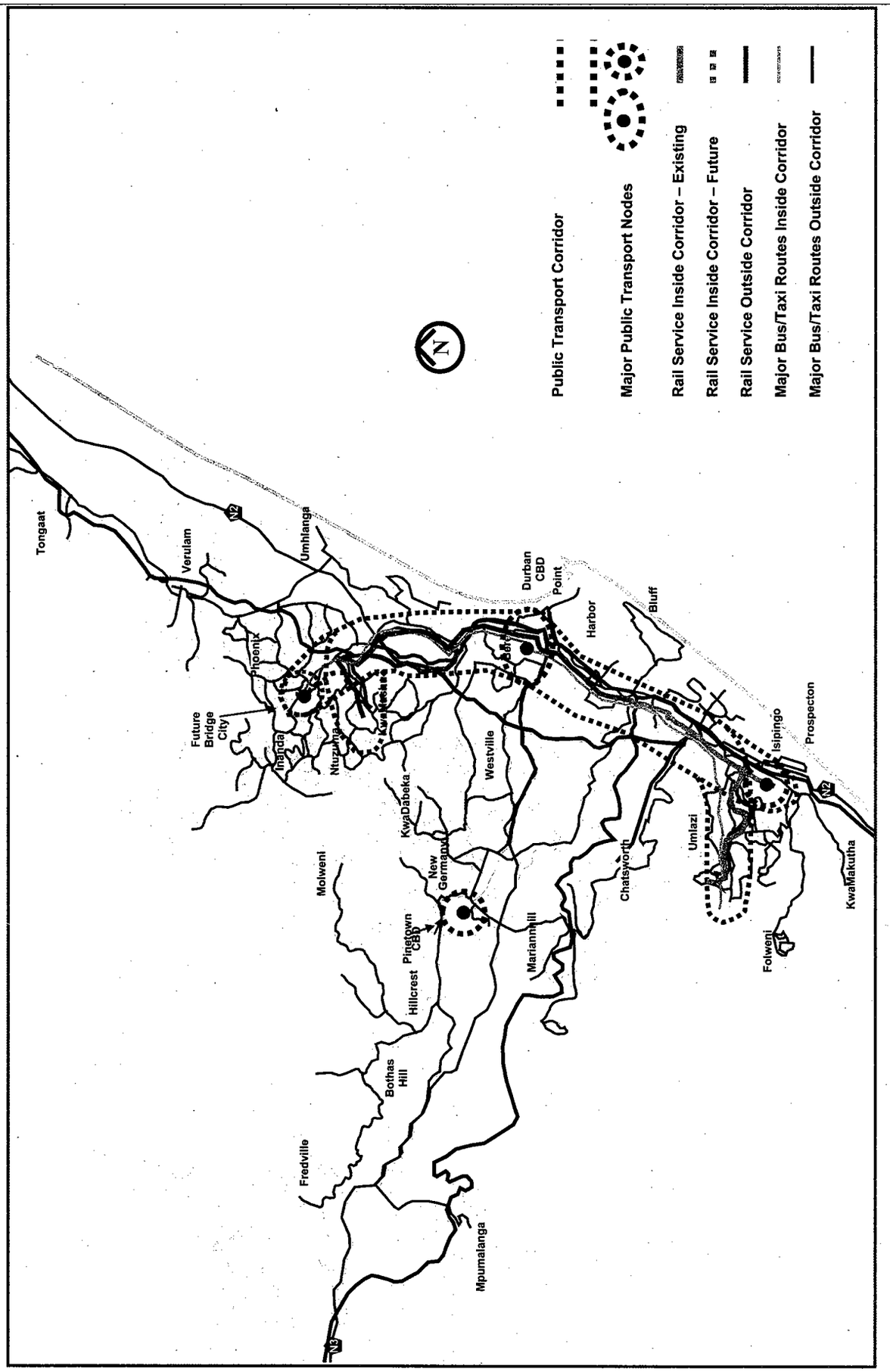
• An attempt using a pilot project to attract ridership back onto the Chatsworth line which is currently under-utilised but has high potential for ridership.

• A combination of bus and taxi modes in other parts of the public transport system with priority for these services where appropriate.

• New or upgraded infrastructure where needed in the system.

Chatsworth rail pilot

• Support for nodal development through the integrated design of major transport transfer/interchanges with land use development at the nodes.



eThekwini Transport Authority — Integrated Transport Plan 2004/2005

Figure 5.3:
Proposed Public Transport System Strategy

• Support for densification along existing and potential future corridors through development of high levels of accessibility to public transport within the corridors.

• Phased development of universally accessible corridors including special needs groups.

Feeder services supporting

Figure 5.4 indicates the location of the following feeder/distributor service areas which will be developed to operate in support of the north-south rail corridor: —

• In the south, Folweni and KwaMakutha feeding to the Isipingo transport node with a comprehensive feeder network in Umlazi to the various rail stations along the Umlazi line.

• In the north, a feeder system in the Inanda area operating to/from Bridge City which would also be the focal point of a feeder system into parts of the Phoenix area on the north side of the KwaMashu Highway (M25). A comprehensive feeder service in the Ntuzuma and KwaMashu areas would operate to/from stations along the KwaMashu rail spur (predominantly KwaMashu station) and to a limited degree for parts of the area to Bridge City.

Modal strategies

• In the Central Durban area, a CBD distribution system providing easy access to Berea and Durban stations. This distribution system could be extended to the Berea area.

• South of Durban CBD in the South Durban Basin (SDB) a number of feeder/distribution systems integrated with the rail service providing convenient access into this intensely industrialised area extending from the airport north to Bayhead.

Collectively the walk-in catchment area to the north-south rail system together with the service area coverage provided by the various feeder/distributor taxi/bus support system, defines the north-south public transport corridor service area (Figure 5.4).

5.4.4 Modal Strategies

5.4.4.1 Introduction

The proposed public transport strategies required around each mode forming part of the system are addressed below under the major mode categories of rail, bus and minibus taxi.

5.4.4.2 Rail Modal Strategy

The broad modal strategy for rail is the following: —

Rail strategy

• Focus on a rail-based system solution in the north-south transport corridor between Isipingo rail station in the south and Bridge City (a future major rail/bus/taxi mode interchange on the north); along with spur lines into the heavily populated area of Umlazi in the south and KwaMashu/Ntuzuma in the north.

• Build a new spur line from Duff's Road station to Bridge City which will serve as a major transfer point onto rail from bus and taxi feeder services into the residential areas of KwaMashu, Inanda and Phoenix.

Rail fleet recapitalisation

• Initiate a pilot project on the Chatsworth rail line to attract commuters back onto rail.

Spur line to Bridge City

To achieve the above requires heavy investment in recapitalising the rapidly deteriorating rail fleet, replacing the antiquated signal system in some locations and upgrading various stations within the system. In addition capital is required for the new spur line to Bridge City.

Apart from the above, bus and taxi strategies are required which will give support to the rail system in the potential catchment area of rail services. Such strategies will need to eliminate destructive competition with the primary mode of rail. These are discussed below.

5.4.4.3 Bus Modal Strategy

The broad modal strategy for bus is contingent upon a firm commitment to a funding strategy for rail which will ensure the potential to deliver the rail strategy within a realistic time-frame. The bus modal strategy is the following —

• removal of services in competition with rail in the north-south coastal corridor.

Bus strategy

• phased introduction of bus contracts, commercial and subsidised, taking into consideration: —

— use of the most appropriate bus mode (standard or midibus) for effective use of capacity and high standards of service.

— consolidation of uneconomic trips, with allocation of trips to minibus taxi where warranted by low passenger loading or service frequency.

— upgrade of vehicles to service contract standards.

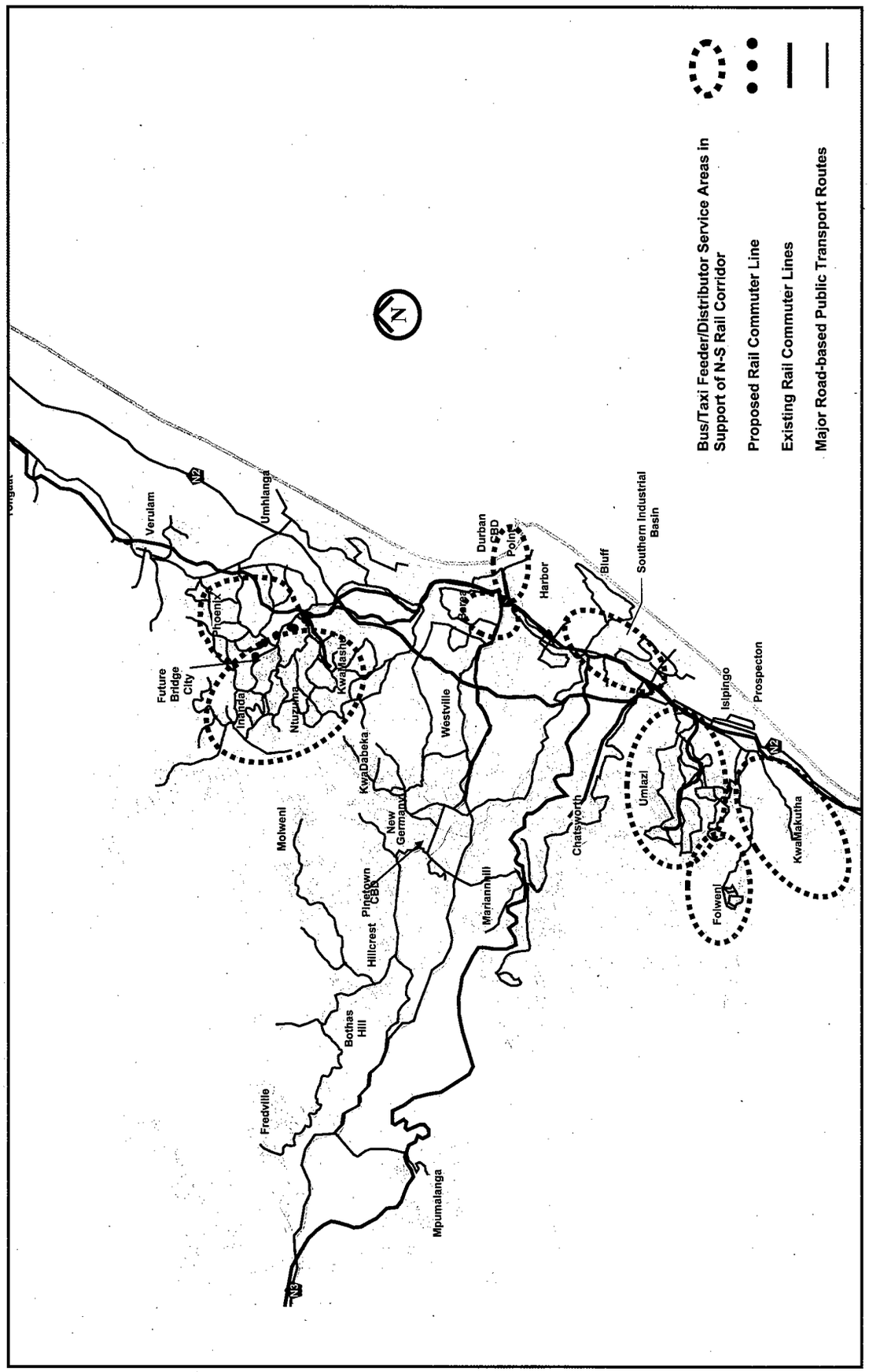


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Figure 5.4:
Feeder Distributor Service Areas in Support of North-South Rail Corridor

Although certain levels of change can be implemented in existing bus contracts, fundamental change can only be effected through new bus contracts. Most existing contracts are for four to five years and many are being renewed in 2004. Privatisation of Durban Transport was effected in 2003 on a seven year contract.

Bus contracts

Compensation guidelines

5.4.4.4 Minibus Taxi Modal Strategy

The modal strategy around the minibus taxi is also contingent upon the successful development of the rail strategy and the Taxi Recapitalisation Programme. It includes the following: —

- removal of taxi services in direct competition with rail or bus contracts.
- phased introduction of commercial or subsidised taxi contracts.
- regulation of the taxi industry through contracts as well as a Quality Service Charter supported by the taxi industry.
- upgrade of vehicles to contract standards, possibly through the national taxi re-capitalisation programme.
- empowerment and promotion of the taxi industry to form consortia to tender on bus as well as taxi contracts.

Taxi strategy

Clearly the timing of implementation of the taxi modal strategy depends on a number of factors apart from the rail strategy. Provision for compensation, in terms of guidelines to be provided by the Minister, is required for removal of licences. Such removals require consultation and negotiation. The preferred alternative of repositioning a route or service would also require consultation and negotiation.

It is also important that opportunities are created for minibus taxi operators who are affected by the restructuring of the public transport system to enter into contracts using other modes of public transport.

5.4.5 Public Transport System and Supporting Land Use Strategies

5.4.5.1 Introduction

Defining the public transport system in terms of major transport nodes and corridors helps to identify in geographic terms the areas that require integration between transport and the land use it serves. The policy of support for public transport through densification along established corridors and attraction of development to significant transport nodes needs to be structured in terms of development strategies which recognise this relationship.

L.U. strategies supporting PT

As described in section 5.4.4.2 the transport strategy not only identifies a public transport system of nodes and corridors but a spatial strategy which supports such a system.

5.4.5.2 Public Transport Nodes and Corridors

The City has identified a High Priority Public Transport Network (HPPTN) in the IDP. As shown in Figure 5.5, this network comprises a number of sections, some with sufficient public transport demand to be defined as a 'public transport corridor', others with a lower level of demand that is typical of a combination of routes that would not qualify as a corridor but are nevertheless key public transport routes.

HPPTN

The north-south sections of the system between Mobeni in the south and Bridge City in the north together with the section into Umlazi are the only parts of the system with adequate demand to be defined as a corridor. These sections carry between 25 000 and 30 000 bi-directional passengers on all public transport modes. Significant transport nodes along this corridor include: —

N-S public transport corridor

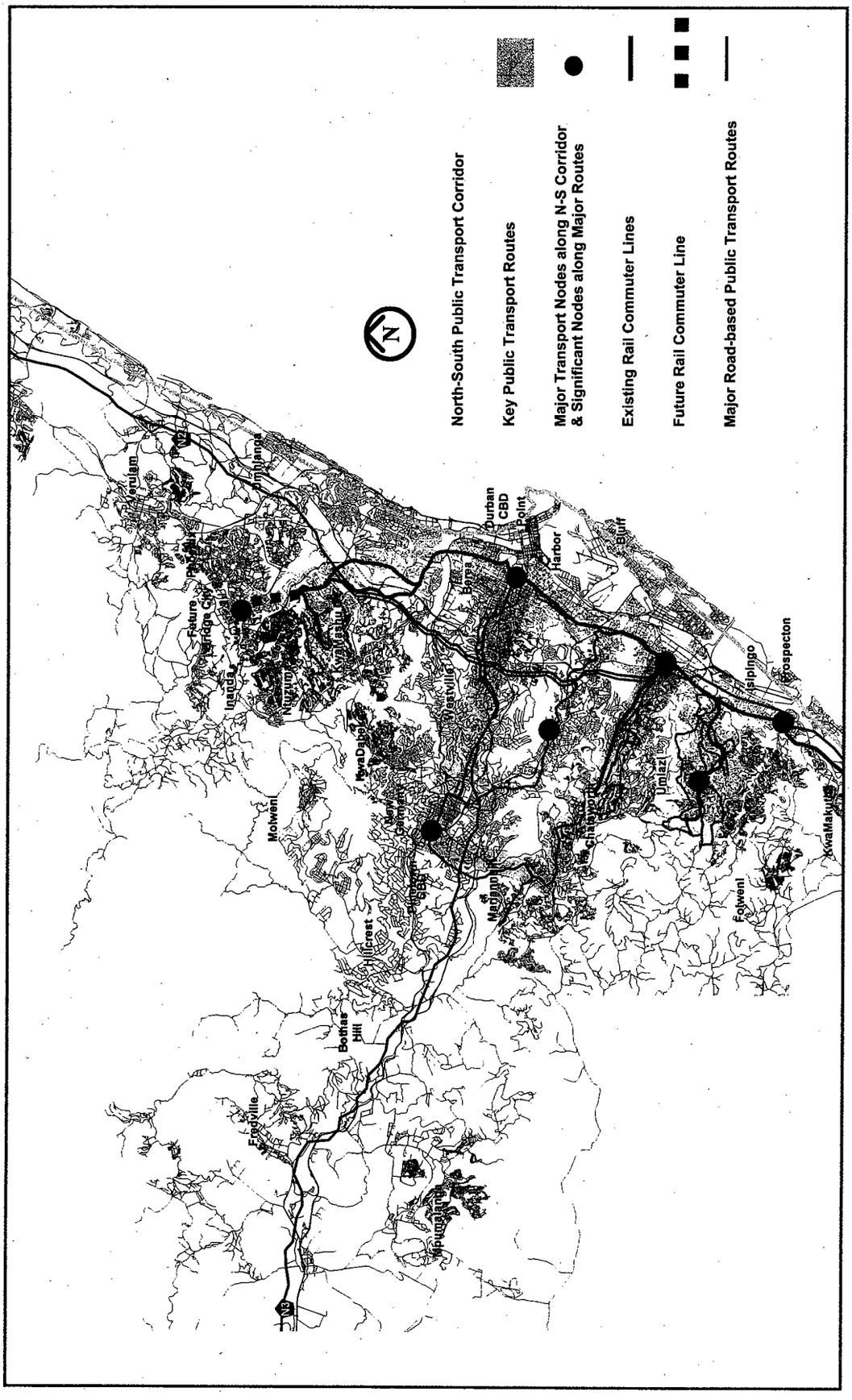
- Bridge City
- Durban CBD
- Extended South Durban Basin
- Mobeni
- Isipingo

Although the demand along the section of the priority network between Isipingo and Mobeni is considerably less than on sections to the north, the location of Isipingo as a major transport node logically extends the north-south corridor through to this node.

Other segments of the priority network link the major regional transport node in Pinetown to the South Durban Basin via the M1 and Durban CBD via the M13. Although there is significant demand along these segments, it is relatively light (<10 000 bi-directional peak hour person trips), insufficient to define such routes as corridors. Similarly the demand along the M5, connecting Malvern Town Centre to Durban CBD and the M10 connecting Cato Manor to the CBD is relatively light.

Key public transport routes

Notwithstanding, these key public transport routes, are important segments of the priority public transport network which where possible should be supported by appropriate land use development.



eThekwini Transport Authority — Integrated Transport Plan 2004/2005

Figure 5.5:
N-S Corridor & Significant Public Transport Routes

5.4.5.3 Spatial Strategies in Support of the Priority Public Transport Network

Spatial strategies to support public transport have been developed and are documented in a report entitled: —

"A Spatial Strategy in Support of the High Priority Public Transport Network — March 2002"

The following table has been taken from this document with modifications related to changes that have occurred in the past four years.

Spatial strategies supporting PT

Various land use strategies have been identified for the combined high priority public transport areas of the network and the non-priority area. Strategies for the non-priority area relate to interventions needed to discourage major employment and trip generating development while those in priority areas are focussed on sustaining and developing the priority network.

Each of the strategies apply to one or other of five areas within the network; these being: —

High Priority Network Area: —

1. The Primary Node comprising the CBD and the industrial harbour area to the south
2. Outer nodes of which Pinetown is the only major node
3. The north-south public transport corridor
4. Key public transport routes

Low-Priority Network Area: —

5. Beyond the Priority Network

OBJECTIVES	STRATEGIES	AREAS OF APPLICATION
Protect the current public transport ridership on the HPPTN	**Strategy 1:** Protect existing employment opportunities	The R102 route, the CBD and the South Durban Basin (SDB)
Protect the current PT ridership on the HPPTN	**Strategy 2:** Maintain the quality of high value investment office retail, residential and tourist areas	The CBD
	Strategy 3: Discourage the development of major employment opportunities outside HPPTN area	Outside of the Urban Edge
Increase the public transport ridership on the HPPTN	**Strategy 4:** Stimulate higher employment intensities and residential densities	Higher employment densities : — – SDB – R102 corridor – CBD Higher residential densities : — – along full length of the North South corridor – Pinetown Node
Increase the public transport ridership on the HPPTN	**Strategy 5:** Renewal of areas around major stations and modal interchanges as high density residential, office and retail uses	Along North — South Corridor and Pinetown node
	Strategy 6: Steer public sector investment (schools, clinics, hospitals and police stations) towards nodes on HPPTN	North — South Corridor and Pinetown Node

5.4.6 Public Transport Infrastructure

Infrastructure forms an important part of the public transport system upgrade. Key projects that form a part of this multi-modal system upgrade include bus and taxi ranks and holding areas as well as selected rail stations.

These projects described below are carried forward into the five year implementation plan, Section 13.

5.4.6.1 Rail Stations

Various rail station upgrades form a part of the North-South rail corridor upgrade in the restructuring of the public transport system (Project 5 — Section 13). Apart from these there are two important new rail stations, these being: —

Bridge City Transport Interchange — A new rail spur line from Duff's Road station will extend to a future development node next to Bester's Camp on the west side of the M25. This node will be a major transfer point for bus and taxi trips from Inanda onto the rail system. Prior to construction of the new rail spur this same location would also be a major taxi feeder to line-haul bus service transfer point.

Kings Park Rail Station — This station is an essential part of the transport solution for the 2010 FIFA World Cup. Conveniently located to the stadium it will ensure rail is one of the main modes of access to the games.

5.4.6.2 Bus Stations

Mansfield Bus Station — This involves the formulation of a bus rank at a key location within the Warwick Junction area. This rank will serve the predominantly southern services and will do away with the need for current Lorne Street bus rank. The facilities to be provided are ablutions, surfacing and full roof, as well as informal trader facilities.

5.4.6.3 Rural Area Minibus Taxi Ranks

The following are taxi rank projects in the urban points of the city, that are included in the five year ITP programme: —

Albert Luthuli Rank — This involves construction of a formal public transport rank at the Nkosi Albert Luthuli hospital in Bellair Road, which will include surfacing, ablution facilities, shelters and a pedestrian bridge with a passenger lift.

Natal Technikon Rank — This involves the consolidation of all the southern long distance routes to operate from the area opposite the Technikon in Smith Street that is currently being used as an informal/temporary rank. The proposal is to first build ablution and surfacing, and later the provision of roofing or shelters.

Canongate Taxi Rank — This rank was built many years ago but there is a great need for a full roof to service the passenger needs.

Cartwright Flats North Rank — This rank was surfaced many years ago, but is in need of a full roof to match the development of the rank on the south side of the site. This is a long distance rank catering for the North and West operators. This rank when fully developed will relieve the rank at Osborne Street that is overflowing with vehicles.

Isipingo Rank — This area is one of the most neglected in the City. Formalised ranks are in great need to cater for the large number of public transport vehicles that service this area.

Merebank Station Rank — There is a need for the provision of a small formal taxi rank in South Coast Road at Merebank Station to cater for the rail passengers. Provision of a surfaced rank with some shelters is proposed.

Amanzimtoti CBD Rank — The formalisation of the public transport rank at Amanzimtoti in the CBD next to the station. At present public transport vehicles operate informally. Ablutions, resurfacing, shelters/roofing, and a public transport rank are required.

Phoenix CBD Rank — The construction of this rank commenced a few years ago. Facilities such as ablutions, shelters/roofing, office and wash bays are needed to complete the development.

Gateway Taxi Rank — The only rank provided in this area is one on private property, at the Gateway Shopping Centre. With the expansion taking place in the area, a further public transport rank is required.

Tongaat Rank — Some ranking has been provided in Tongaat but improvements to some of the ranks are needed.

Verulam CBD Rank — Some ranking has been provided in Verulam but improvements to some of the ranks are needed.

KwaMnyandu Taxi Rank — This rank has been operating for years on an informal basis. The provision of ablution facilities, surfacing, shelters, and a taxi office is required.

Mangosuthu Highway/Taxi Rank at Road 1202 — The formalisation of this rank is needed to cater for the needs of the passengers that have no facilities apart from a dusty or muddy surface. Facilities required are ablution facilities, surfacing, shelters, and a taxi office.

Kingsburgh Taxi Rank — Land has been acquired for a rank, but funding is needed for the provision of ablution, surfacing and shelters.

5.4.6.4 Minibus Taxi Holding Areas

Taxi holding in the ranks and along the streets in Durban CBD is a major contributing factor to congestion in this area. A key element of the rationalisation of taxi loading and holding is the provision of conveniently located de-centralised holding areas. The first two projects that form a part of the ITP are the following: —

Umgeni/Churchill Road Holding Area — A conveniently located area north of the CBD on Umgeni Road at the signalised intersection with Churchill Road. This site can be developed to hold approximately 170 taxis with 26 formal wash bays, and a toilet block and facilities building.

Canberra/Williams Road Holding Area — A conveniently located area south of the CBD on Williams Road at Canberra intersection. This site can be developed to hold approximately 220 taxis with 24 formal wash bays and a toilet block/facilities building.

Bluff Taxi Holding Area — The existing holding area in Bluff Road needs to be formalised by the Province and surfacing is needed with some shelters.

5.5 Operating Licence Strategy

The OLS is developed from analysis of the CPTR data surveyed in 2003/2004.

The primary purposes of the OLS are: —

Purpose of OLS

• to act as a framework for the eThekwini Transport Authority (ETA) to give direction to the Operating Licence Board (OLB) on the issuing/amendment or withdrawal of taxi or bus operating licences.

• to provide a tool for the ETA to implement the requirements of the Public Transport Plan.

The documentation in this section of the ITP is supported by a separate comprehensive analysis report.

5.5.1 General Principles

Principles

This section sets out key conditions for granting of an operating licence for bus or minibus taxi operations. These conditions include some of the key requirements set down in national legislation (NLTTA 2000) which the provincial Operating Licence Board (OLB) will apply in reviewing applications. As such these requirements/policies are also reflected in the ETA's policy.

The following policy relates to general principles that set the framework for consideration and allocation of road-based public transport licences.

5.5.1.1 Licence Allocation Principle

Allocating new licences or required changes to existing is clearly the responsibility of the Operating Licence Board (OLB). In the past the taxi industry in some locations has attempted to control which associations should be allocated licences for new service areas. This creates potential for conflict and is counter-productive in the delivery of a properly rationalised and restructured public transport system.

Allocation licences

Problems can also arise when public transport operators take the viewpoint that they have a right to be allocated a licence.

The fundamental principle which address this issue is: —

No. 1 The responsibility for determining the number of public transport licences required vests with the Transport Authority.

The current problems of over-trading in some areas and the need to restructure and rationalise the public transport system and services will necessitate a carefully structured programme of repositioning and in some instances removal of existing licences.

Outstanding issue:
The ETA needs to be able to re-position operators in addressing over-trading and under-trading in different areas as well as to allocate licences in new service areas.

In order that such service changes do not introduce conflict with those operators directly affected, or with those who perceive themselves to be affected, a process must be developed which adequately addresses these potential issues and any others that could be associated with such changes.

New Licences

New licences to new operators will not be issued except under exceptional circumstances until such time as the problems of over-trading and the need for re-positioning have been dealt with.

5.5.1.2 Licence Validity Period

In consideration of the validity period for new licence applications the ETA will give due regard to: —

Assessment of current/ future needs for licencing

• Current and expected trends in utilisation of the route(s)

• The efficiency of the proposed services in meeting user needs

• Where applicable, in terms of planning recommendations for the future public transport system, the likelihood that the particular mode of public transport may be replaced by another mode

• The likelihood that the public transport service may become the subject of a commercial service contract or a subsidised service contract

Policy in this regard is: —

No. 2 As per the requirements of the NLTTA 2000, no new operating licence will be issued for a period longer than five years, except where the licence is issued pursuant of a permit allowed for in terms of provincial legislation, as in the case of a seven year subsidised bus contract.

Licence validity period

5.5.1.3 Transfer of Licence

The ETA's policy in this regard is: —

No. 3 The ETA will not support applications for the transfer of an operating licence from the holder of the operating licence to another person, for which the holder of the operating licence has been providing the service for less than a period of one year.

Where transfers are permitted the first option for purchase belongs to the ETA.

In the case of the taxi industry, the person to whom the operating licence is transferred must be registered as a member of an association or registered as a non-member. To avoid potential conflict, the ETA will recommend that the person to whom the operating licence is transferred belongs to the same taxi association(s) as those operators that are currently operating on the route.

5.5.1.4 Number of Taxi Routes per Licence

Outstanding Issue:

The system of route rotation where minibus taxis each have an opportunity to operate on the more profitable routes within a set of routes is problematic and needs to be addressed as part of a longer term licence strategy.

Route rotation

5.5.1.5 Preparation of Recommendations

Section 5.5 addresses the process of licence approval in respect of the interaction of the Operating Licence Board and the ETA. Within this context the ETA's policy on the preparation of licence recommendations is as follows: —

Preparation of recommendations

No. 4 The ETA will make its recommendation and any representations it considers fit, having due regard to the Passenger Transport Plan and any other relevant investigations carried out, and submit them to the OLB within the required period.

The ETA's recommendation will address: —

• rank / holding areas availability at origin and destination

• preferred mode on route/corridor

• utilisation of existing services

• long term planning requirements

5.5.2 Conditions for Granting of Licences

The following policy relates to conditions that will need to be met for a licence to be approved. All regulations within the Road Traffic Act (1996) will need to be complied with and are not repeated in the PTP.

5.5.2.1 Person Qualifying for Operating Licence

In line with the requirements of the NLTTA 2000, ETA policy is: —

No. 5 Except on the conversion of a taxi permit to an operating licence, no person has a right to be issued with an operating licence. An operating licence in respect of a minibus taxi type service may only be granted to a person who is either: —

Registered membership for minibus taxi licence

— a member of a provisionally or fully registered association

— a registered non-member

— a person who has applied for registration as a non-member and has been granted a certificate contemplated in section 113(2) of the NLTTA

No. 6 Applicants for bus and minibus taxi licences must show proof of or the ability to secure passenger liability insurance from a recognised insurer.

Passenger insurance

Operating licences can only be uplifted on presentation of proof of passenger liability cover.

The operating licence will become invalid if at any stage passenger liability cover is terminated and it is the responsibility of the operator to immediately inform the OLB of termination of cover.

5.5.2.2 Membership per Route

No. 7 A person applying for a new minibus taxi operating licence, on an existing route, must belong to the same association(s) as the operators currently providing service on that route.

5.5.2.3 Vehicle Standards and Equipment

The following policies apply to vehicle standards for approval of a licence, replacement of a vehicle and requirements for special equipment.

SABS/SANS vehicle standards

No. 8 All vehicles must comply with SABS or SANS standards and specifications.

Vehicle replacement

No. 9 Where the holder of an operating licence wishes to replace the vehicle that is specified in the operating licence with another vehicle with the same passenger capacity, the holder must apply to the Board for approval on the basis that the replacing vehicle meets all requirements in the original licence and the quality of service is not affected.

Special equipment

No. 10 Special equipment (eg. Special needs access) attached to approval of a licence must be installed and operational before commencement of service.

5.5.2.4 Access to Ranking

Ranking facilities

No. 11 The granting of an operating licence is conditional upon the necessary rank permits being obtained and annually renewed and if a rank permit is not renewed the operator must cease to operate on that route.

The procedure for applying for a minibus taxi or metered taxi rank permit can be found in the annexures available on CD. An operating licence must state the authorised ranks or terminals specific to the route on the licence. Other points of picking up and setting down of passengers along routes will only be permissible at points specifically designated by the ETA

Where the need for public transport services is justified in terms of user demand, but insufficient capacity exists at the pick-up and drop-off points, support of the application will be subject to there being available funding for rationalisation or upgrading of the required facilities.

5.5.2.5 Access to Holding for Minibus Taxi Operators

Holding Space

No. 12 It will be the responsibility of the minibus taxi licence applicant to identify suitable holding space in a location acceptable to the ETA.

5.5.2.6 Service Levels for Minibus Taxi

No. 13 Subject to other conditions being met the following guidelines will apply to consideration of licence approvals for services between defined origin-destinations: —

— **acceptance** if demand 100% or more of existing service capacity

Demand criteria

— **possible acceptance** dependent upon other considerations if demand = 50 — 99% of capacity (eg. i) pending addressing current issues of over-trading and the possible opportunities to re-position selected services; ii) in CBD other criteria related to service frequency/wait time may be used to determine need)

— **rejection** if demand < 50% of capacity unless offering a premium user-pays or special needs service

5.5.2.7 Timetable and Fare Data

Timetable and fare structure

No. 14 Service timetable or frequency of service must be attached to licence applications.

No. 15 Special conditions regarding fares must be attached to licence applications.

5.5.3 Licence Application and Approval Process

5.5.3.1 The Process

The approval process involves the Provincial Operating Licence Board (OLB), the KZN Department of Transport and the eThekwini Transport Authority.

In broad terms the process is as follows: —

- The applicant submits application to the OLB in terms of required content and defined procedures;

Application procedures

• the OLB supported by the KZNDOT evaluates the application in terms of the defined criteria detailed in KZNDOT's document 'Operating Licence Strategy' for KZN.

• if the application meets these criteria it is forwarded to the ETA with support data for consideration and approval. These criteria include inter alia: —

Licence approval process

— demonstrated need for service

— demonstrated financial viability

— fitting within the PTP

— meeting legislated requirements for the applicant and vehicle

• the ETA will make recommendation to the OLB for approval, deferment or rejection based on their own assessment of the application.

Currently in terms of KZNDOT requirements the applicant is responsible for demonstrating demand and need for service as well as the preparation of a business plan demonstrating financial viability. The KZNDOT requires the proposal to be submitted in terms of a proforma which has not yet been finalised.

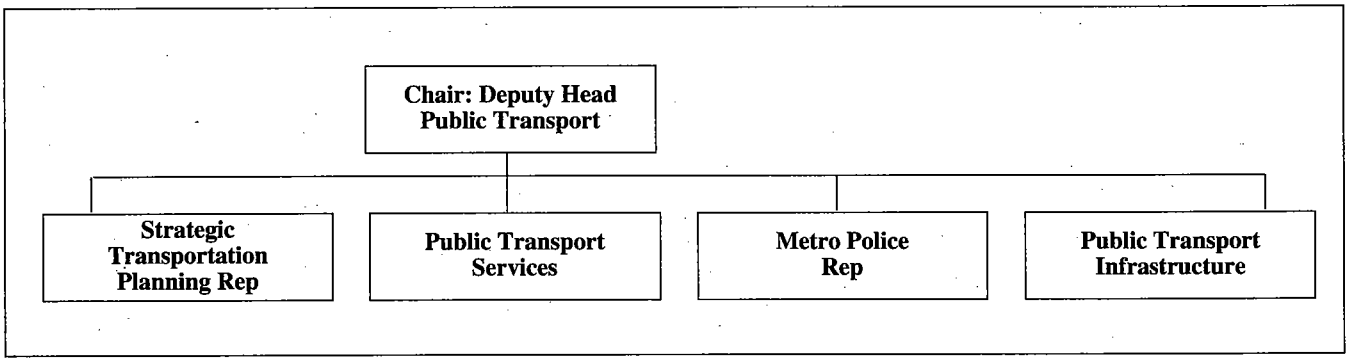
The ETA's position regarding the provision of relevant supply and demand data is that the CPTR is the database. The relevancy of this database will be maintained on the basis of selective key counts and observations only, on an annual basis, with a full survey programme being conducted at an interval yet to be determined, but possibly every five years. Further, the ETA deems this data set to be suitably accurate to make valid recommendations on all applications.

5.5.3.2 The ETA's Administrative Structure

CPTR as data source for supply/ demand

The review of licence applications received from the KZNDOT will be managed by the structure shown in Figure 5.6. This group with their supporting staff will be able to evaluate an application from any aspect of current supply, demand, as well as problems and issues within the context of current and future system needs.

Figure 5.6:
ETA Licence Application Adjudication Structure



5.5.4 Public Transport Enforcement Strategy

Service agreement

Public transport enforcement is a specialised area of law enforcement. The eThekwini Transport Authority has entered into a service agreement with the eThekwini Metropolitan Police Service for this purpose. In terms of this agreement the police services provide a dedicated force for enforcement which is directly accountable to the ETA in terms of the Service Agreement, contained in the annexures on CD.

In terms of this agreement the police service referred to as the Enforcement Agent will be responsible for: —

Service agreement functions

- On the ground regulation of operators providing public transport services;
- Monitoring and regulating the conduct of operators and drivers of public transport services, ensuring compliance with the Public Transport Operational Code prescribed by the MEC for Transport in KZN in April 2001;
- Enforcement of municipal by laws associated with the operation of public transport services including access to and use of public transport facilities such as ranks, holding areas, bus stops, lay byes, etc.
- Enforcement of quality control and safety aspects associated with the operation of public transport vehicles in terms of the National Road Traffic Act and relevant regulations.

Quality Service and Passenger Service Charters

In support of the above the development of a Quality Service Charter and Passenger Service Charter (as referred to in Section 3 — Broad Public Transport Policy) will also integrate into the enforcement strategy framework.

5.5.5 Operating Licence Strategy Analysis — Parameters and Criteria

~~Full analysis of the CPTR and the preparation of the OLS are contained in the Operating Licence~~ Strategy available in the annexures on CD,

OLS analysis parameters & criteria

In evaluating PT system performance there were several parameters for which values were required, related to individual bus and taxi routes in the system; these being: —

- Utilisation rate (based on seated capacity for taxi, seated & standing for bus)
- Passenger volume
- Frequency/headway and waiting time
- Fleet factor with average speed and turnaround time

In analysing route performance for each survey period, it is the peak hour for each route which is critical. Parameter values for the morning or afternoon peak hour were therefore used in the analysis.

The following sets out the values and considerations used for each of the above in preparing the OLS: —

- **Utilisation Rate (UR)**
  - Bus under-utilisation – UR < 40%
  - Bus over-utilisation – UR > 100%
  - Taxi under-utilisation – UR < 50%
  - Taxi over-utilisation – UR > 99%

Utilisation rate

The differences by mode are due to buses carrying standees and to taxis usually waiting until they are full before departing.

- **Passenger Volume**
  Hourly volume was the primary determinant in considering the most appropriate mode, conditioned by minimum desirable frequency. In the interests of minimising changes of mode, the volume threshold for recommending smaller vehicles on bus routes was made lower than the threshold for larger vehicles on taxi routes, as shown in the following table.

Passenger volumes

Passengers/Hour by Vehicle Type

Route Mode	Route Passengers/hr (major direction)	Recommended Vehicle Capacity	Type
Bus	< 100	16/18	Taxi
	100 – 200	35	Midibus
	> 200	80-100	Standard Bus
Taxi	< 300	16/18	Taxi
	300-500	35	Midibus
	> 500	80-100	Standard Bus

- **Frequency/Headway and Waiting Time**
  These factors are related in theory but not always in practice. Allowing for extraordinary circumstances in the analysis, for general purposes in the peak hour, a 15 minute wait time was adopted as the threshold between acceptable and poor level of service. This translates into desirable maximum headway of 20 minutes or 3 vehicles/hour. The values in the following table show the frequency/headway/waiting time values that are applied in considering the most appropriate mode.

Frequency/ headway/ waiting time

Route Mode	Route Pass/hr	Vehicle Type	Frequency (Trips/hr)	Headway (minutes)	Waiting Time (minutes)
Bus	< 100	Taxi	up to 6	down to 10	5 or more
	100 – 200	Midibus	3 to 6	10 to 20	5 to 15
	> 200	Standard Bus	3 or more	20 or less	up to 15
Taxi	< 300	Taxi	up to 20	down to 3	3 or more
	300-500	Midibus	9 to 15	4 to 7	3 to 6
	> 500	Standard Bus	6 or more	10 or less	up to 6

In framing recommendations, the target frequency was considered to be 3 vehicles per hour or more when considering vehicle types.

- **Fleet Factor (FF)**
  FF is a route related parameter, which is an indication of the efficiency of fleet. It is the theoretical fleet size needed/actual fleet to operate the route and for bus and taxi is based on the

route distance, an assumed average speed and layover time (both controllable), the number of vehicle trips and the number of unique registration numbers, average vehicle capacity and the number of passengers. Assumed average speed was 30km/hour and layover time 10 minutes. Low values of fleet factor represent inefficient operation and high values more efficient operation. The normal value ought to be 1.0 if the correct speed was assumed. The threshold value for reasonable fleet use was taken as 0.9, which was used, inter alia, in recommending whether or not new taxi licences should be issued.

Fleet factor

5.5.6 Categories of Evaluation

Three categories of evaluation were carried out in preparing the OLS; these being: —

- Corridor analysis of movements between significant residential and employment areas.
- Individual route evaluation of performance with recommendations, including contracted bus services and routes running through Pinetown CBD split for analysis purposes.
- Taxi association evaluation to assist in consideration of applications by an association not specifically for an individual route.

Categories of OLS evaluation

5.5.7 Corridor Analysis

The corridor analysis focuses on the peak hour commuter movement between 55 residential and 23 employment areas of significance which are composed of groups or single traffic zones used in the metropolitan traffic model. The major inter-area AM peak hour passenger movements greater than 1000 are shown in Table 5.3.

The table shows the following: —

- There are only seven employment areas that attract more than 1000 public transport passengers per hour from any of the individual major residential areas.
- Four of these employment areas Tongaat Central, Verulam Central Isipingo and Hammarsdale only attract such volumes from residential areas in close proximity to the employment areas.
- Pinetown CBD is the only other employment area apart from Durban Central (Durban CBD and Point) which attracts volumes of > 1000 passengers per hour from remote residential areas.
- Durban CBD attracts volumes of > 1000 per hour passengers from 21 of the residential areas located throughout the Municipality.

Corridor analysis

Table 5.3: AM Peak Hour Bus and Taxi Passengers (Volumes > 1000, to nearest hundred)

No	Analysis Area	E01 Tongaat Central	E02 Verulam Central	E08 Hammarsdale	E11 Pinetown CBD	E15 Point	E16 Durban CBD	E23 Isipingo
R01	Tongaat Residential	2 900						
R03	Verulam Residential		2 500					
R04	Phoenix South						1500	
R05	Phoenix North						5800	
R07	Amaoti/Ohlange						1100	
R08	Piesang River						1400	
R09	Amatikwe/Goqokazi						2600	
R10	Newtown A/Gwala's House					1200	2700	
R11	Ntuzuma				1800	1200	3800	
R12	Lindelani						1400	
R16	Newlands West						2200	
R17	Newlands East						1700	
R20	Chesterville						1800	
R21	Cato Manor						3600	
R23	Berea North						1100	
R25	Clare Estate						1100	
R27	Clermont/KwaDabeka				2800		1900	
R34	Mpumalanga			1200				
R38	St Wendolins/Klaarwater				1500			
R39	Chatsworth West/Shallcross						1900	
R40	Chatsworth East						5000	
R43	Merewent						1400	
R46	Umlazi North						3700	
R47	Umlazi Central						1300	
R48	Umlazi South						3300	

R50	Folweni/Golokodo	1600
R53	Adams/Msahweni	1600

The OLS report shows corridor movements from each major residential origin area to the 3 major trip transfer centres (Durban, Isipingo and Pinetown) in the morning peak hour as well as the reverse movement from the 3 areas in the afternoon peak hour. The overview sheets include a table of inter-area service statistics by mode, a small map showing the routes, a map showing band width arrows and passenger totals along with a paragraph of comments. An example of this output is shown in Figure 5.7.

The Durban CBD information for the afternoon peak is shown on the next three pages. Information on the numerous destinations shown in the OLS are grouped into 3 regions in the following table with the bus and taxi routes plotted on the respective maps (Figure 5.8 and 5.9). The salient feature of the two maps is the wide coverage of the metropolitan area by Durban-based routes, both bus and taxi. It is also worth noting the high utilisation levels for both bus and taxi services in the PM peak hour.

Table 5.4: Area to Area Corridor Service Analysis

Durban CBD to Major Employment and Residential Areas: PM Peak Hour

Destination Area	Mode	No. of Routes	Vehicle Trips	Service Capacity	Passengers	Utilisation Rate
North	Bus	46	129	11891	10313	87
West	Bus	56	187	12357	8727	71
South	Bus	44	113	10673	8482	79
Sub-Total		**146**	**429**	**34921**	**27522**	**79**

Destination Area	Mode	No. of Routes	Vehicle Trips	Service Capacity	Passengers	Utilisation Rate
North	Taxi	93	908	14012	13773	98
West	Taxi	47	793	11979	11754	98
South	Taxi	50	767	11550	11343	98
Sub-Total		**190**	**2468**	**37541**	**36870**	**98**

Figure 5.7: Area to Area Corridor Services Analysis

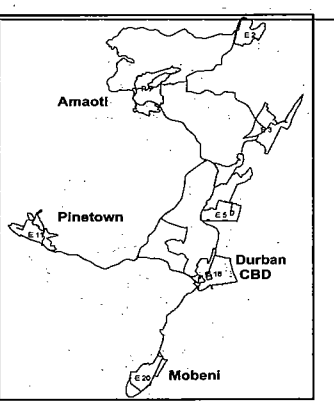
R07 Amaoti/Ohlanga to Major Employment Areas: AM Peak Hour

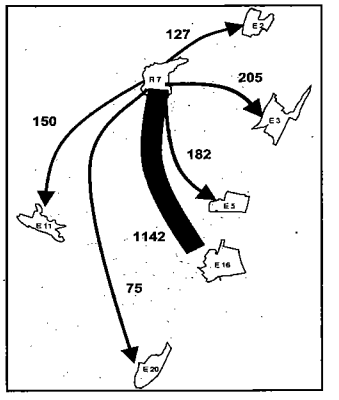
Destination Area	Mode	No. of Routes	Vehicle Trips	Service Capacity	Passengers	Utilisation Rate
E03 Umhlanga	Bus	2	2	181	150	83
E05 Hypermarket	Bus	1	2	180	182	101
E11 Pinetown CBD	Bus	2	2	183	150	82
E16 Durban CBD	Bus	1	2	181	150	83
E20 Mobeni	Bus	1	1	90	75	83
Sub-Total		**7**	**9**	**815**	**707**	**87**

Destination Area	Mode	No. of Routes	Vehicle Trips	Service Capacity	Passengers	Utilisation Rate
E02 Verulam Central	Taxi	4	18	279	127	46
E03 Umhlanga	Taxi	2	8	120	55	46
E16 Durban CBD	Taxi	7	72	1149	992	86
Sub-Total		**13**	**98**	**1548**	**1174**	**76**

Comments

Total passengers some 1900/hr. Bus routes to Umhlanga (29km) with good utilisation and fleet factors, Hypermarket (32km) fully utilised with high fleet factors, Pinetown (41km) fully utilised with high fleet factor, Durban CBD (38km) with high utilisation and fleet factor, and Mobeni (51km) with high utilisation and fleet factor. The Amaoti Taxi Association operate to Verulam, Umhlanga and Durban CBD, from several origins on D403 only 1km apart, inter alia, similar to eTiyeni and Amaotana, with low and variable utilisation (13-99%) the majority of routes being between 25 and 75%. Fleet factors vary from 0.19 to 1.21 which reflect erratic use of the fleet and of capacity, except for the Durban routes, most of which are satisfactory. There appears to be an oversupply situation which could be ameliorated somewhat by route rescheduling. When Fundamental Restructuring is implemented the Durban services should become feeders to Inanda Station 1.





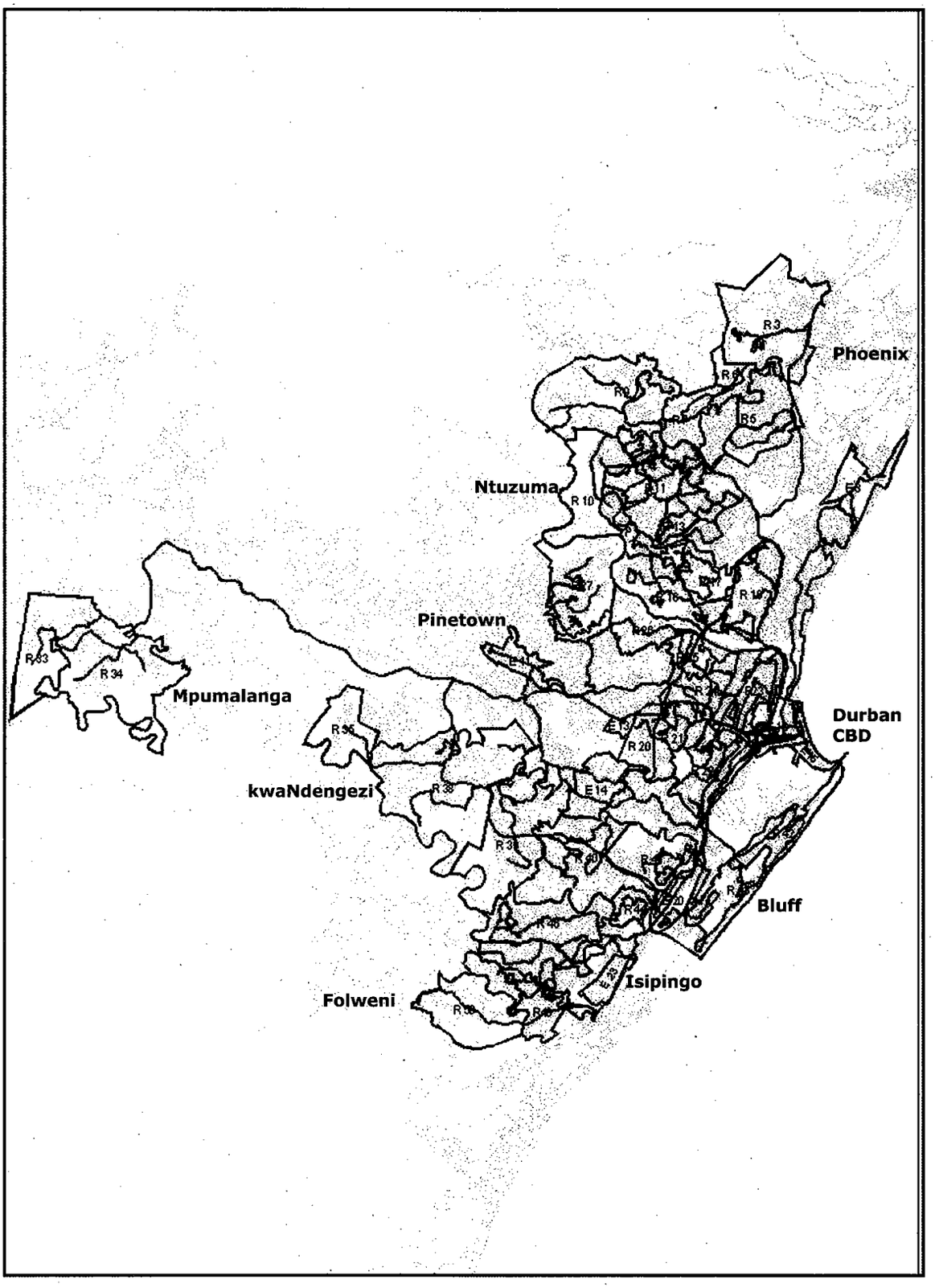


Figure 5.8:
Area to Area Corridor Service Analysis
Bus Routes from Durban CBD

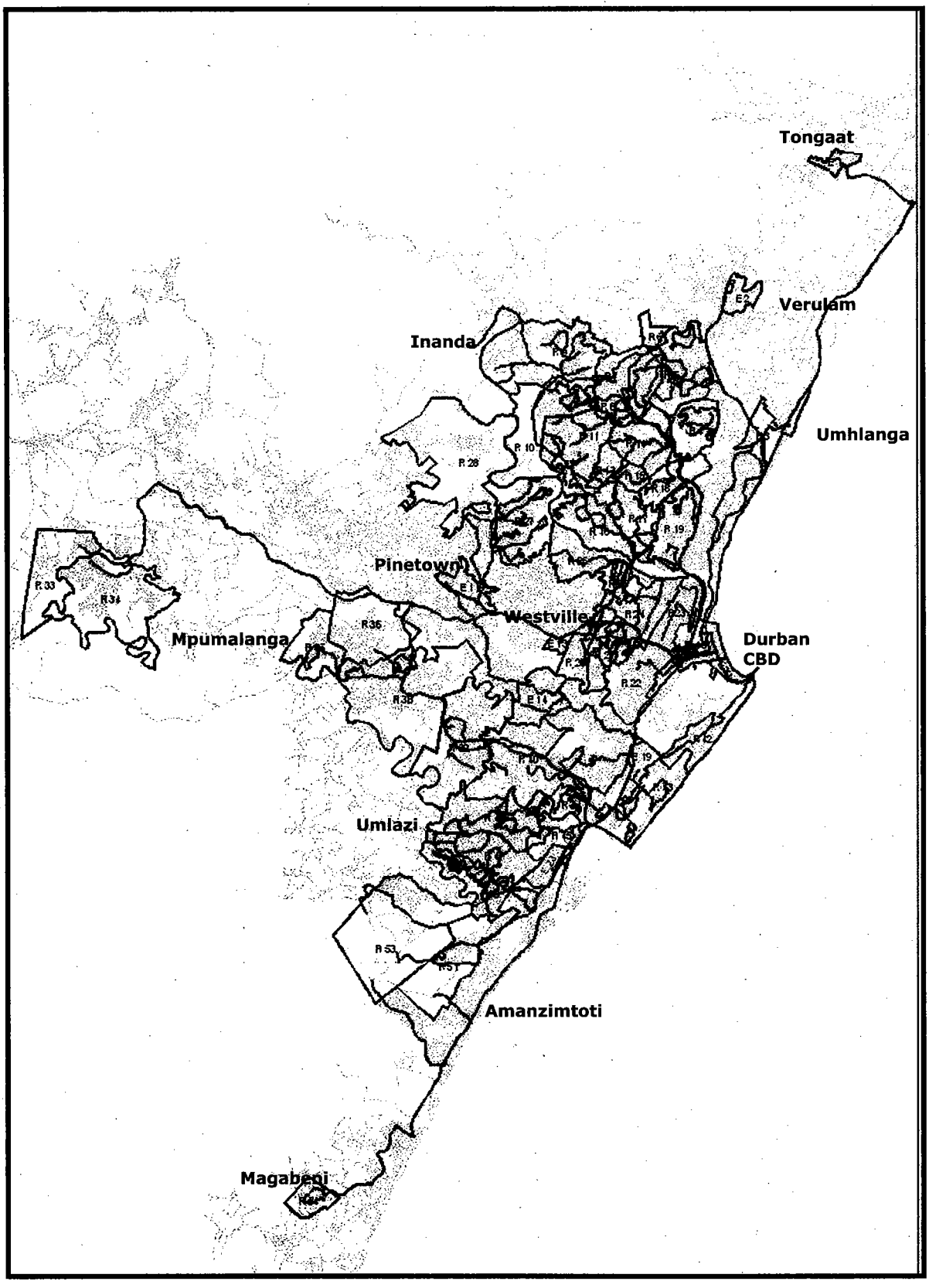


Figure 5.9:
Area to Area Corridor Service Analysis
Taxi Routes from Durban CBD

5.5.8 Individual Routes Evaluation

The area to area corridor analysis provides a good overview of service utilisation throughout the Municipality but it is not detailed enough to consider applications for route licences. The OLS therefore evaluates each individual route giving comments and recommendations for each. The standard comments and recommendations shown in Table 5.5 cover a range of conditions that are defined in terms of the criteria discussed in Section 5.5.1. The taxi industry is over-traded, therefore recommendations support the issue of new licences only in proven cases of shortage of capacity on a particular route.

An example of a route evaluation/comments/recommendations summary sheet is shown in Figure 5.10.

Table 5.5 Standard Route Comments and Recommendations

	Standard Comments for Individual Routes		Recommendations Related to Comments
1	No peak service found on survey day.	11.1	Insufficient data for recommendation.
2	Satisfactory bus operation. No action needed.	2.1	No further licences at present.
3	Adequate bus capacity and utilisation, but better frequency needed. 35 Seater would be appropriate.	3.1	Possible midibus route to match demand. No further licences for standard buses at present.
4	Bus utilisation 100% or more but poor frequency. 35 Seaters would be appropriate.	4.1	Possible midibus route to match demand. Alternatively 1 or 2 new licences after verification of patronage.
5	Inter-city or long distance coach or taxi services. Low frequency not an issue. No action needed.	5.1	No further licences at present unless unequivocally justified by applicant or until survey data is available.
6	Low frequency, low volume (<100/hr) bus route. 18 Seaters would be appropriate.	6.1	Possible route for 18 seater vehicles. Alternatively no further licences at present for standard buses.
7	Reasonable to good bus frequency and utilisation 100% or more. Candidate for more trips per hour, but boarding volumes at origin usually much lower than driver interview volumes. Further verification of utilisation would be prudent before approval of further licences or trips.	7.1	1 or 2 new licences after verification of patronage.
8	Under-utilised taxi route (<50%).	8.1	No new licences at present.
9	Fully utilised taxi route (100% or more), low frequency (3 or less/hr) long wait >15 min. Candidate for more service if fleet factor >0.9.	9.1	(FF>0.9) — Up to 3 new licences may be issued
		9.2	(FF<0.9) — No new licences at present, unless shown that fleet is used efficiently.
10	Fully utilised taxi route (100% or more), moderate to high frequency (4 or more/hr), moderate (5 to 15 min) wait.	10.1	No new licences to be issued at present.
11	Fully utilised taxi route (100% or more), moderate to high frequency 4 or more/hr), short wait (<5 min).	11.1	No new licences to be issued at present.
12	Fully utilised taxi route (100% or more), moderate to high frequency (4 or more/hr), long wait > 15 min. Could be due to rank throughput limitations (no action on service) or to insufficient service. Action to be dependent on examination of rank operation.	12.1	(FF > 0.9) If rank is inadequate, reorganise or enlarge the rank, or relocate route start point. If insufficient service, up to 3 new licences may be issued, or more after demand surveys carried out. (FF < 0.9) If rank is inadequate, reorganise or enlarge the rank, or relocate route start point. If insufficient service, the association should be encouraged to use the fleet more efficiently.
13	Taxi passenger volume from 300 to 500/hr. Candidate for 35 Seater vehicles. (The range may differ for reverse route in other peak).	13.1	Possible candidate for midibus size vehicles, if rank can accommodate them and if not in competition with north-south rail corridor. Otherwise no new licences.
14	Taxi passenger volume >500/hr. Candidate for normal buses. (The range may be less for reverse direction in other peak).	14.1	Possible standard bus route if not in competition with north-south rail corridor. If rank unsuitable for buses, relocate route start/end point. Otherwise no new licences.
15	Adequate or well utilised taxi route (50% to 99%), passenger volume 15 to 300/hr. No action needed.	15.1	No new licences to be issued at present.
16	Specific vias or Durban destination not distinguished in survey. Route probably shares in patronage noted for other vias or Durban destinations.	16.1	Check performance of equivalent route with survey data and apply recommendation for that route.

eThekwini Transport Authority

Route Detail Sheet

Route: FW034T

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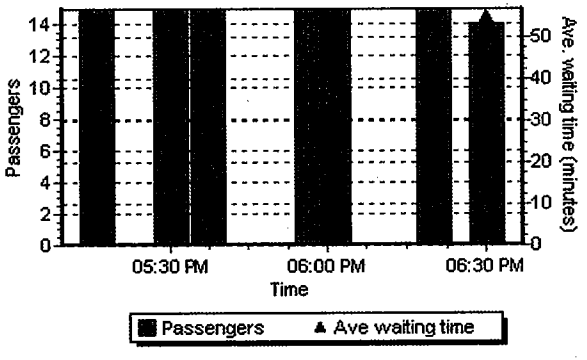
Printed: 2005/02/09 09:52:38 AM

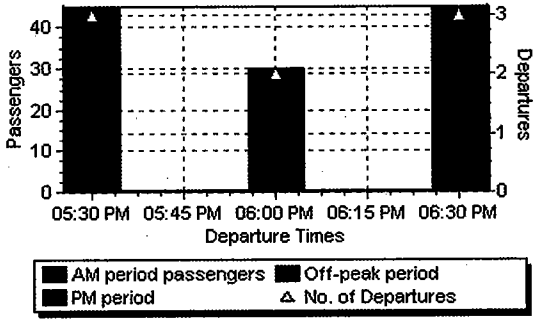
Route Description

CPTR Route No	FW034T
Route Name	University Avenue Taxi Rank to Sobizi
Origin Name & GPS ID No	University Avenue Taxi Rank (E052)
Destin. Name & GPS ID No	Sobizi (C054)
Via Points	M4 (s)
Route Length	34.8km
Mode	Mini-Bus Taxi
Operator/Association	Folweni T.A.
Operator Route No	
Service Type	Commuter
Route Type	Normal Route
Inside Metro	Yes
Definite	Yes

Waiting Times



Route Utilisation



Based on totals for 30 minutes ending at the indicated time.

Service Capacity and Utilisation

	AM Peak	Off Peak	PM Peak
Peak Hour Start			17:16
Number of Veh Trips			6
No of Unique Reg No's			6
Ave Veh Capacity			15
Service Capacity (No of pass)			90
Utilisation (No of pass)			90
Utilisation %			100%
Fleet Factor			1.25
Spare Capacity			0

Timetable Departure Times

Comments

111: Fully utilised taxi route (100% or more), moderate to high frequency (4 or more/hr), long wait >15 min. Could be due to rank throughput limitations (no action on service) or to insufficient service. Action to be dependent on examination of rank operation. Competes with north-south rail service (may need feeder service).

Recommendations

611: (FF>0.9) - If rank is inadequate, re-organise or enlarge the rank or relocate route start point. If insufficient service, up to 3 new licences may be issued, or more after demand surveys carried out.

Figure 5.10:
Route Recommendation Route

5.5.9 Taxi Association Evaluation

Currently many taxi licence applications refer to an association and its routes rather than to one specific route. The aim should be to encourage operators to apply for a specific route licence, particularly when larger vehicles commence operation. However, this would reduce an association's flexibility of operation, particularly in situations where marshals are in radio contact and call for vehicles to cater for passenger demand.

Taxi associations evaluation

For many years bus owners associations have pooled resources and shared routes. The list of approved routes accompanies the licence approval and is kept in the vehicle. This procedure may also work for taxis.

The assessment was carried out for each of the taxi associations, as a whole. Of the 1064 routes with survey data, only 103 were possibly eligible for additional licences, depending on rank operation. In respect of larger vehicles, 144 routes had volumes appropriate for 35 seaters and 15 for standard buses. In these categories it should be noted that the routes in the database are uni-directional, therefore the above numbers would be approximately halved in respect of two-way routes.

5.5.10 Subsidised Bus Contracts

Taxi associations evaluation

In recent years, bus operations which were subsidised on the basis of multi-journey tickets have been converted to contracts wherein subsidy is paid on the basis of bus kilometres travelled. The contracts were not necessarily awarded to the company previously operating the service. There are currently 4 operators with contracted routes, though one was split into two in the CPTR for geographic reasons, making 5 for the purpose of the OLS. These are: Durban Transport, Combined Transport (North and West), Two Line Trading and Thokomala Transit.

The performance of the 5 contract operations is summarised in Table 5.6 for the morning peak hour.

Table 5.6 Contracted Bus Operations (AM Peak Hour)

Operator	Surveyed Routes	Vehicle Trips	Trips/ Route	Service Cap	Pass. Volume	Utilisation Rate
Durban Transport	353	681	1.9	56504	43537	77
Combined Transport (N)	51	77	1.5	7210	5590	78
Combined Transport (W)	32	51	1.6	4300	2996	70
Two Line Trading	4	8	2.0	611	442	72
Thokomala Transit	16	27	1.7	2474	1670	68
Total	**456**	**844**	**1.85**	**71099**	**54235**	**76**
Total all Bus Operators	**697**	**1489**	**2.14**	**128056**	**94232**	**74**
Contract as % of All	**65**	**57**		**56**	**58**	

Preferred PT models

The contracts cover roughly two thirds of all bus services and their peak hour utilisation is slightly better than all services, utilisation of non-contract services being 70%. The utilisation rates of contract operators are reasonably similar, maximum variation being 10%. The number of peak hour trips per contracted route averages a low 1.85 which reflects a low frequency of service. For this reason, many routes would be better served by 35 Seaters and even 18 Seaters, to provide better frequency for passengers as shown in the following table.

Table 5.7 Bus Routes by Operator with Particular Recommendations

Operator	Suitable for		Need More	Surveyed Routes Routes
	35 Seater	18 Seater		
Durban Transport	252	190	20	532
Combined Transport (N)	32	42	3	84
Combined Transport (W)	26	19	0	48
Two Line Trading	3	3	0	8
Thokomala Transit	8	9	0	21
Total	**321**	**263**	**23**	**693**
Total all Bus Operators	**429**	**381**	**33**	**1022**

It is noteworthy that, to give a reasonable frequency, 46% of surveyed contracted routes would be better served with 35 Seater vehicles and 38% with 18 Seaters. Only 3% appear to need more buses to improve service capacity. These proportions for all bus services are only fractionally lower.

5.5.11 Rail Services

Rail services

There are 8 basic rail routes, all radiating from Durban. There are 51 rail routes in the database with trains in either or both peak hours, but with different start or end points on the 8 basic routes. For example, the south coast line has services from Durban to Isipingo, Amanzimtoti, Umkomaas, Scottburgh, Park Rynie and Kelso, some in the morning peak, some in the afternoon peak and some in both peaks. Some services on the KwaMashu and north coast lines run via Redhill, the majority running via Effingham.

Grouped and simplified peak hour rail passenger totals are shown in Table 5.8. The largest number of peak hour passengers is 7000, from Umlazi to Durban in the morning peak. Even so, average utilisation on this route is only half of capacity. Only 3 other routes with more than one train have utilisations over 50%: Stanger and Cato Ridge to Durban in the morning peak, and Durban to Stanger in the afternoon peak. The one train from Umlazi to Wests in the morning peak is full. A larger train (1530 capacity) would be appropriate.

Table 5.8 Peak Hour Rail System Utilisation

Origin	Destination	No of Trains	Service Capacity	Pass.	Util Rate (%)	
(a) Inbound: AM Peak Hour						
Umlazi	Durban	9	13770	7000	51	
KwaMashu	Durban	9	13770	4000	29	**Rail Services**
Stanger	Durban	3	3950	2800	71	
Isipingo & beyond	Durban	5	6050	2400	40	
Cato Ridge	Durban	4	6120	3600	59	
Pinetown	Durban	2	2420	400	17	
Crossmoor	Durban	2	2420	500	21	
Umlazi	Wests	1	1210	1200	100	
	TOTAL	**35**	**49710**	**21900**	**44**	
(b) Outbound: PM Peak Hour						
Durban	Umlazi	7	10710	4300	40	
Durban	KwaMashu	7	10710	2200	21	
Durban	Stanger	4	5800	3200	55	
Durban	Isipingo & beyond	4	4840	1500	31	
Durban	Cato Ridge	3	4590	2100	46	
Durban	Pinetown	1	1210	200	17	
Durban	Crossmoor	1	1210	400	33	
Wests	Umlazi	2	2420	700	29	
	TOTAL	**29**	**41490**	**14600**	**35**	

5.6 Implementation Strategy

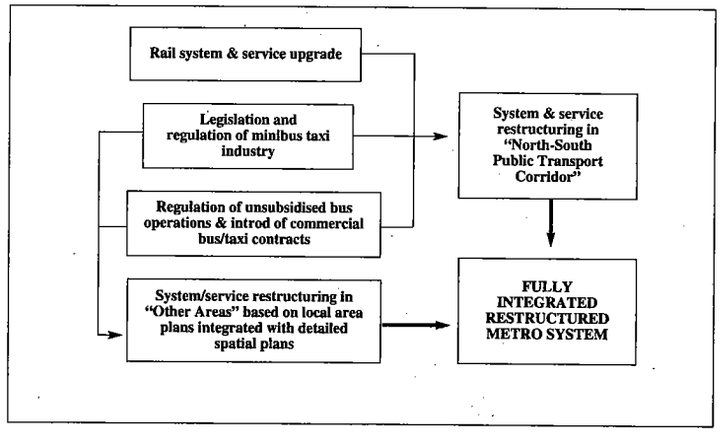
5.6.1 Introduction

This section of the Public Transport Plan provides input to the preparation of the prioritised implementation plan for the Integrated Transport Plan as documented in Section 13. The following public transport implementation strategy is documented within the context of the modal strategies and key aspects of the Public Transport Plan. In effect, it catalogues the recommended initiatives and projects forming part of the PTP, highlighting where appropriate key issues around the roll-out of the Plan in the short to medium term.

5.6.2 Unfolding of the Public Transport Strategy

The following figure gives a broad context to the roll-out of the long term restructured public transport system for the metropolitan area.

Figure 5.11: Roll-Out Strategy for the Restructured eThekwini Public Transport System



The timeframe for delivery of the restructured metropolitan-wide system depends on achieving various milestones in the development of each modal strategy. These milestones are identified in the following sections.

For the public transport plan to be properly integrated with the full range of land use development strategies, the development of such strategies should run concurrently. The Spatial Development Framework (SDF) which interprets the development strategies in geographic terms also provides the framework for the preparation of detailed local area spatial plans. As these plans are being developed, local area public transport plans can also be prepared and integrated as part of a parallel process.

5.6.3 Rail Strategy

Rail is planned as the backbone of the north-south public transport corridor system; however, the currently run-down, deteriorating rail system must be radically upgraded for this to be achieved.

Outside of this corridor the need to upgrade some rail services needs to be addressed as part of an implementation programme for the rail component of the public transport system.

The following are the five key strategies which comprise the Rail Strategy for the eThekwini Municipal area: —

Strategy 1: Rail Investment for the North-South public transport coastal corridor

- Finalise memoradum of agreement with SARCC for upgraded rail infrastructure. **Rail investment**

Strategy 2: New rail spur line to Bridge City

- Plan, design and award construction contract for new rail spur from Duff's Road Station to Bridge City development **New spur line**

Strategy 3: Upgrade and Revitalisation of Chatsworth Rail Service **Chartsworth line security upgrade**

- Implement security systems, on board, at rail stations and at park 'n ride locations

Strategy 4: Marketing of North-South Public Transport Corridor System

- Plan and implement marketing strategy including system branding, integrated with information systems. **Marketing N-S corridor**

Strategy 5: Kings Park Rail Station

- Design and construct in preparation for 2010 World Cup **Kings Park Station**

5.6.4 Bus Strategy

In the proposed public transport system bus plays a support role in the north-south public transport corridor by providing some of the feeder-distribution systems. Currently, a number of bus services operate in direct competition with the rail service in the transport corridors and this is one of the problems that must be addressed in the implementation strategy for bus.

Beyond the north-south corridor, bus also plays a major role in an integrated system of bus and taxi services.

Strategy 1: Feeder-distribution services as integral part of the N-S public transport corridor system

- Formalisation of relevant minibus taxi services **Feeder/ distributor services**
- Develop and implement programme for introduction of feeder-distribution bus/taxi services including: —
  - — Durban CBD PT priority system
  - — Berea system

Strategy 2: Remove/reposition bus services in direct competition with rail service in N-S public transport corridor **Services in competition with rail**

- Negotiate repositioning of non-contract services and rationalise contract services on completion of contracts

Strategy 3: Rationalise bus system and service contracts in areas removed from the N-S corridor

- Analyse existing bus/taxi system needs by local area
- Rationalise subsidised bus service contracts when each is renewed **Rationalise bus system**
- Identify opportunities/need for commercial service contracts
- Negotiate service charges with non-contract operators

Strategy 4: Improve infrastructure and operating conditions of existing bus services

- Implement short term (Years 1-5) programme for construction of shelters and laybys **Infrastructure upgrades**
- New bus rank at Mansfield

5.6.5 Minibus Taxi Strategy

The minibus taxi currently plays a major role in the metropolitan public transport system and will

continue to do so into the future. In doing so however there will be a changing focus on the role of the taxi. Increasingly, the emphasis will be on quick turn-around routes where operators can operate more profitably.

Minibus taxi strategy

Feeder-distribution services in particular will benefit from the high frequency quick turn-around type of service that can be offered by the minibus taxi mode.

In the north-south public transport corridor minibus taxi will provide many of the feeder-distribution services. In the areas beyond the north-south corridor minibus taxi will play an important role in the integrated system of bus and taxi services. However, to become an effective part of the integrated systems the minibus taxi industry needs to become fully legalised and regulated. The following highlights the components of a minibus taxi implementation strategy to achieve these objectives:

Strategy 1: Develop the OLS for all route-based operations and implement service changes

Minibus taxi OLS

- Evaluate OLS recommendations on route and service changes required in terms of over and under-supply of service
- Analyse cost implications for service rationalisation
- Negotiation and introduction of service changes

Strategy 2: Regulate and control minibus taxi operations in the eThekwini Metropolitan area

Regulation

- Provide route and service data to public transport law enforcement team and implement enforcement programme in terms of service agreement
- Drivers training programme for awareness and commitment to Quality Service Charter and Passenger Service Charter

Strategy 3: Feeder-distribution services as integral part of N-S public transport corridor system (Refer also to 5.6.4 — Strategy 1)

Feeder/ distribution services

- Prioritised programme for introduction of feeder-distribution bus/taxi services
- Develop programme for allocating service contracts to existing operators, a) from over-traded areas, b) from parts of system impacted by restructuring in PTP and implement

Strategy 4: Remove/reposition minibus taxi services in direct competition with rail service in N-S transport corridor

Services in competition with rails

- Identify minibus taxi services in direct competition with rail and develop a programme for repositioning of services

Strategy 5: Rationalise minibus taxi routes and services in areas removed from the N-S Corridor

Rationalisation

- Analyse existing bus/taxi system needs by local area
- Rationalise subsidised bus service contracts when each is renewed, identifying opportunities/needs for minibus taxi services
- Identify opportunities/need for commercial and/or subsidised minibus taxi service contracts and implement

Strategy 6: Improve infrastructure and operating conditions for existing minibus taxi services

Infrastructure upgrades

- Implement the short term (Years 1-5) programme for construction of: —
  - — taxi laybys and shelters
  - — rural area ranks
  - — urban area ranks and holding areas

5.6.6 Non-motorised Transport (NMT) Strategy

Non-motorised transport apart from walking includes bicycles and animal-drawn carts/wagons for carrying people from point-to-point. Although slower than motorised public transport these modes have the advantage of being personalised to the needs of individuals in terms of when the journey is made and the routing.

NMT strategy

Animal-drawn transport needs to be largely restricted to rural parts of the metropolitan area however, cycling can be used in many parts of metro where topography permits. The focus of the current programme is on the cycling component of NMT.

Strategy 1: Develop and implement programme of cycle projects

- Develop cycle policy
- Possible cycle pilot project — Clermont
- Identify other locations and develop an implementation programme

5.6.7 Special Needs Public Transport Strategy

Special needs public transport passengers may include not only those with physical challenges, but children, the elderly, pregnant women, the illiterate and foreign tourists unable to communicate in any locally used language.

A range of initiatives will be introduced to meet these different needs. However as documented in the PTP policy — Section 5.1, the initial main focus will be on the development of the N-S public transport corridor as a universally accessible corridor, as this will impact on the greatest number of public transport passengers.

Special needs strategy

Strategy 1: Develop N-S PT Corridor as a universally accessible corridor

- Identify system needs in CBD and along N-S Corridor in terms of infrastructure, fleet and communication requirements (eg. Signage, auditory messaging, etc)
- Develop and implement a prioritised, phased implementation programme

Universally accessible corridor

Strategy 2: SUKUMA Project — Umlazi and KwaMashu

- Evaluate the SUKUMA project (2 retro-fitted buses on fixed routes in Umlazi and KwaMashu) and identify other locations where this or a similar type of service could be introduced
- Introduce service contracts in a phased programme for extending this service if funds are available

SUKUMA project

Strategy 3: Accessible Buses in New Bus Contracts

- Develop specification requirements for 'accessible buses'
- Determine number of units and routing as part of the system design specification for preparing bus contract tenderers

Accessible buses

Strategy 4: Driver Training Programme

- Introduce into bus driver training programmes a training module on acceptable and required procedures for embarking, disembarking and carrying of special needs passengers with different categories of mobility impairment.

5.6.8 Intermodalism Strategy

Intermodalism is an inherent aspect of the restructured, rationalised public transport system. In its broadest application in the N-S Corridor it includes rail, bus and minibus taxi.

The rail strategy for the N-S public transport corridor will include all modes forming a part of the corridor system solution. Further, the system solution will incorporate sub-systems essential to the effective performance of the overall system, including inter alia: —

Inter modalism strategy

- Through ticketing
- Security systems
- Information systems (Phase 1 — A Call Centre)

Apart from the N-S corridor, intermodalism will be incorporated into other parts of the metropolitan public transport system. These sub-systems will be developed and implemented as various parts of the overall public transport system are implemented.

Strategy 1: Public Transport Information System

- Develop the requirements (system architecture) for components of a comprehensive system for the metropolitan area
- Roll out a phased implementation programme including a PT Service Call Centre

Information system & call centre

Strategy 2: Through-ticketing System

- Develop system architecture
- Conduct a pilot

Through ticketing

Strategy 3: Develop inter-modal system in N-S Corridor as part of Rail Strategy

Note to refer to: —

5.6.3 Rail Strategy

5.6.4 Bus Strategy

5.6.5 Minibus Taxi Strategy

N-S Corridor inter-modal system

These collectively form a part of the inter-modal system strategy for the N-S public transport corridor.

- Prepare and implement a prioritised roll-out programme for various rail, bus and taxi components of system incorporating integrated ticketing, information systems and security systems.

Integrated system implementation

5.6.9 TDM Strategy

Whilst TDM projects have been identified for implementation in the short term programme, there

is need to identify other projects as the various bus and taxi routes and services are restructured. Projects in this section address this need.

TDM strategy

Strategy 1: Develop and implement TDM Programme

- Investigate full range of TDM measures and potential sites for implementation
- Implement TDM measures in CBD (including CBD public transport priority measures – 5.6.4 – Strategy 1) in short term programme

5.6.10 Bus Subsidy Strategy

For some of the subsidised bus services the benefit does not reach many of the poor. Consequently, there is a need to investigate ways in which the available subsidies can be focussed on defined areas/services impacting on a larger segment of this sector of the commuter market.

Strategy 1: Targeted Subsidy Project

Targeted bus subsidies

- Investigate the basis for and locations for introducing targeted subsidies and implement a pilot project

5.6.11 Land Use Restructuring Strategy

Section 5.1 sets out a number of public transport policies related to user-side subsidy, more efficient public transport, and land use policies in support of these principles.

Apart from the targeted subsidy project (5.6.10) there is need to introduce a pilot project on more efficient residential land use in support of public transport. In effect this will be achieved by subsidising land costs.

Strategy 1: Subsidised Low Income Housing

- Investigate location opportunities for low income housing which will be highly accessible to public transport and reduce the trip distance for essential travel.
- Recognising the reduced need for expenditure on essential services for such communities, consider various models for subsidising such development.
- Implement a pilot project.

5.6.12 Customer Focus Strategy

Apart from cost, the major concerns of public transport passengers, are for safe, reliable, convenient service. Two projects identified in Section 5.1 — Policy, focus on these aspects of public transport. They are the development and adoption of: —

- A Passenger Service Charter
- A Quality Service Charter

These provide the definition and terms of reference for the type of service passengers have requested in the Stated Preference Surveys conducted by the Municipality. They also provide the context for effective enforcement by the dedicated public transport enforcement team contracted to the ETA by the Metropolitan police services.

Strategy 1: Quality Service Charter

Quality service charter

- Engage operator forums and prepare the Charter
- Adopt and implement

Strategy 2: Passenger Service Charter (PSC)

Passenger service charter

- Taking into consideration the national initiative to develop a PSC, engage local passenger/ community forums and adapt the national charter as necessary
- Adopt and implement Charter

Strategy 3: See also Customer Call Centre 5.6.8 — Strategy 1

5.6.13 Tourism Strategy

The public transport needs of tourists are recognised as quite different from those of daily commuters and residents. At the same time unique modes and/or service for tourists can add to the attractiveness of eThekwini as a tourist destination thereby having a positive impact on the local economy. The following project is a particular application meeting this need.

Strategy 1: Develop People Mover System

People mover

(See Section 10 — Special Projects)

5.7 Monitoring and Key Performance Indicators

Part of the IDP vision includes *"...growing the economy and meeting peoples needs so that all citizens enjoy a high quality of life with equal opportunities..."*

Public transport's contribution to achieving this vision requires performance on the delivery of the PTP, as well as performance of the system in achieving the various public transport goals. Consequently, performance monitoring using various key performance indicators (KPI's) is an essential part of the delivery of the PTP.

5.7.1 Key Performance Indicators (KPI's)

Table 5.9 sets out a range of KPI's for the five public transport goals as identified in Section 5.1 of this report.

KPI's

Apart from defining each goal this table notes the probable source of data needed to measure performance and the recommended frequency of measurement.

Table 5.9 Monitoring of the ETA's Public Transport Plan
Key Performance Indicators (KPI's)

Output to be Evaluated	KPI No	Key Performance Indicator: Description	Source	Comments	Report Frequency
Goal 1 — Effective Public Transport:					
• Passenger satisfaction with public transport service	1	No of complaints/1000 passengers per month	• Monitored in Remant Alton contract • Requires call centre for system	• Needs call centre (Note: Section 9.9.2)	Monthly
• Promotion of use of public transport	2	Modal split (% of motorised transport users on public transport in peak period)	• ETA	• Part of annual monitoring programme	Every 3-5 years
	3	Average age of subsidised bus and commuter rail coach fleet	• KZNDOT and SARCC	• KZNDOT (becomes ETA responsibility as bus contracts are taken over)	Annual
• Promotion of access to public transport	4	Kilometers of roads used for PT per hectare in rural areas	• ETA -	—	Every 2-3 years
• Promotion of accessibility to public transport	5	% of households spending more than 10% of disposable income on public transport	• Quality of life survey	—	Annual
• Accommodation of Special Needs Groups	6	No of corridors with fully accessible P.T. • No of dedicated vehicles for special needs	• ETA/KZNDOT -	—	Annual
	7	% of contracted bus fleets fully accessible in select areas still to be determined	• KZNDOT	—	Annual
Goal 2 — Efficient Public Transport:					
• Efficient PT operations	8	Average travel time to work for all public transport commuters	• Quality of life survey	—	Annual
• Efficient bus operation	9	Average no of passengers carried per subsidised bus per day	• KZNDOT	—	Annual
• Efficient rail service	10	Average number of rail passengers per service per day	• Metrorail	• Currently Metrorail function. Info available only when provided	2-3 years
• Taxi-Recapitalisation progress	11	% of minibus taxi fleet re-capitalised	• OLB	• Only possible when Re-cap programme operational	Annual
• Good delivery of public transport projects	12	% of capital projects delivered within time and budget	• ETA	—	Annual

• Effective regulation and control of public transport vehicles	13	% fully legal public transport operators	• OLB	• Measurable once provincial taxi database is fully updated	Annual
Goal 3 — Sustainable Public Transport					
• Road-based public transport service regulation and legislation	14	% of services operating with a fixed route permit	• OLB	• Currently an OLB function; available only when Board provides	Annual
• Land-use restructuring (for monitoring)	15	Development density along PT priority corridor(s)	—	• Exact measures to be developed	5 years
Goal 4 — Safe & Secure Public Transport:					
• Improved public transport security	16	Reported incidents monthly per 10 000 passengers	• SAPS	• Access procedures need to be set up	Annual
• Improved public transport safety	17	Various KPI's from Road Safety Plan X-reference to Sect 13.2 for full list of KPI's and targets in the Road Safety Plan	• ETA	• To be developed in Road Safety Annual Plan & incorporated into ITP	
Goal 5 — Black Empowerment in Public Transport:					
• Extent of ownership and participation in public transport and related activities	18	Number of contracts and value by type of contract	• ETA	—	Annual
• Procurement of services	19	% of budgets allocated to PDI firms	• ETA		Annual

6 MAJOR ROAD PROPOSALS

6.1 Introduction

The planning and provision of roads in eThekwini is seen as part of an integrated programme for delivery of a holistic transport solution for the metropolitan area. As discussed in Section 3.6.1 the needs of the various stakeholder groups differ. In developing a prioritised roads programme these needs are recognised and considered within the context of the development imperatives expressed in the IDP vision; these being: —

IDP focus

- Meeting peoples needs;
- Growing the economy.

Further, within the framework of national transport policy, embraced within the IDP, the roads programme responds to the directive to prioritise the needs of public transport commuters over the use of private motor vehicles.

The roads programme in this section of the ITP is discussed under five categories. In many instances projects can be identified within more than one category which increases the overall benefit of such a project. The five categories are: —

Roads programme categories

1. Accessibility
   This relates to upgrading that improves access to local communities or routes required to link areas of greatest need to well resourced areas. In effect, this category focuses on projects in the rural and peri-urban areas often isolated from accessibility to opportunity through the effects of apartheid planning.
2. Freight
   This category focuses on projects which will improve the safe, efficient movement of heavy vehicles into and through the City. Accessibility to areas that are major freight generators and attractors is also a key aspect of this focus.
3. Economic Development Focus Projects, Bottleneck Elimination and Safety
   The focus of this category is to ensure that effective functioning and planned growth of key economic activity centres within the City are not constrained by bottlenecks in the road system.
4. Public Transport
   The prioritisation of public transport over the private motorist highlights the need for certain roads projects. Invariably these projects are focused on providing additional capacity for public transport or enabling some form of priority movement of public transport vehicles over private transport.
5. Capacity
   The ETA's approach towards identifying roads needs recognises the financial and physical impracticalities of trying to accommodate the private transport growth trend by building more and more

roads. The adopted approach of managing demand for road space through various strategies including promoting public over private transport is accompanied by placing affordable and practical limitations on the development of new roads.

Roads programme categories

Within this context however there is need for a number of road projects to address current and pending capacity issues that negatively impact on the effective and efficient functioning of the City. Most of these projects will be required in the medium to long term however there are a number of projects in the short term that are needed to address current capacity issues. However, not all of these will necessarily be affordable within available funding constraints.

6. Project Packages
This category identifies road infrastructure requirements in support of other initiatives including key city projects, such as the new airport and associated trade-port. Generally, this category is addressed separately, as the requirements for these roads projects are exclusively related to the timing of separately funded initiatives.

The information in this section of the ITP is taken from the ETA report entitled "Towards an Integrated Transport Plan — Long Term Road Infrastructure Plan — January 2004". (The summary of this report dated May 2004 is contained in the annexures available on CD). In addition input was sourced from the three year Municipal Capital Budget and received from the various municipal planning departments as well as KZNDOT and SANRAL.

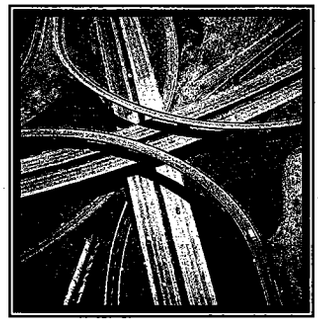
Data sources

6.2 Roads Policy

The following focuses on two key aspects of road policy which relate to provincial and national roads in the eThekwini Municipality. At this stage there is no need for additional policy on roads

6.2.1 Toll Roads

The planned introduction of additional toll points on national roads within the Municipal Area is an issue for the eThekwini Council.



Currently there are two tolls in the eThekwini Municipal area, one at Mariannhill on the N3 and the other at Tongaat on the N2.

Two additional toll points are being considered, namely in the south at Prospecton on the N2 and to the west at Key Ridge on the N3.

Toll roads

In general terms, the Council is not in favour of such tolling as it has negative impacts, including: —

- Diverting trucks to alternative routes affecting commuter peaks in terms of road safety and capacity;
- Deterioration of road pavements on alternative routes due to deviating heavy vehicles;
- Re-routing traffic through sensitive locations (eg. In the vicinity of schools, shopping areas, etc.) affecting the quality of the environment as well as increasing the potential for pedestrian and vehicular accidents.
- Overall negative economic impact on eThekwini Municipality.

Consequently, the Council has adopted the following policy on toll roads: —

No. 1 The Council is opposed to the tolling of roads within eThekwini Municipality and in particular the introduction of any new toll points.

6.2.2 Devolution of Provincial Roads

The KZN Provincial Roads Department is currently negotiating with the Municipality to devolve certain provincial roads within the metropolitan area to local government. Various issues around agreed requirements for the condition and standards of these roads remain unresolved.

Consequently, the ETA has adopted the following policy on the taking over of provincial roads: —

No. 2 Whilst not opposed to the principle of devolving provincial roads within the municipal area to local government, the Municipality is cautious about the issue of unfunded mandates.

6.3 Road Project Proposals

This section tabulates the roads projects in terms of the five categories described above.

6.3.1 Accessibility Focused Projects

Most of the following projects shown in Table 6.1 are proposed to upgrade local roads ensuring a reasonable standard of surfaced, all weather roads providing access to the major road network and improved quality of life to local residents. An important aspect of these projects is the ability to improve public transport service to areas accessed from these roads.

At the regional level, MR577 improves accessibility between the northern and western areas of the City.

Table 6.1 Accessibility Focused Road Projects

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
Existing Local Roads Projects Incl:					
• Nazareth residential roads (1)	E	6.2	5.2	1.0	
• Carick Road upgrade incl new bridge (2)	E	6.0	6.0		
• Intake Road bridge (3)	E	1.9	1.9		
• Dassenhoek rural roads (4)	E	5.7	5.7		
• Matwabula Road upgrade (5)	E	6.0	6.0		
• Other	E	1.4	1.4	22.0	
Rural Community (EPWG) Roads Prog. (Phase 2) (6)	E	33.8	33.8		
New major road MR577 from KwaDabeka to Duffs Rd (7)	C	450.0		450.0	
Rural Community (EPWG) Roads Prog (Phase 3) (8)	E	51.6		51.6	
Rural Community (EPWG) Roads Prog (Phase 4) (8)	E	10.0		10.0	
D403 Ext — Inanda to R102 Verulam (9)	E	10.0		10.0	
Five Year Programme Total				**544.6**	
Post 2010 Projects					
M30 from Umbumlulu to Mangosuthu H'way in Umlazi (10)	E	5.0			5.0
M40 from M61, between Umbumbulu & Shongweni Dam (11)	E	4.0			4.0
M28 Inanda Dam to Hazelmere Dam (12)	E	15.0			15.0
M48 (Wiltshire Road) (13)	E	5.0			5.0
P529 (M53) Craigeburn (14)	E	5.0			5.0
P98 (M25) from Redcliffe to Amatikwe (15)	E	6.0			6.0
M4 Grimsby Link (thru racecourse) (16)	E	500.0			500.0
KwaMakhuta Access Road (17)	E	10.0			10.0
Industrial Access Rd @ Existing Airport (Himalaya-Joyner) (18)	E	60.0			60.0
Post 2010 Programme Total		610.0			610.0

Note 1) E = eThekwini Municipality
C = Public/Public combo or Public/Private combo

6.3.2 Freight Movement Focused Projects

Currently there are two roads projects under construction which are a part of the main freight haulage route system in the metropolitan area. These are shown in the following table: —

Table 6.2 Freight Movement Focused Projects

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
Edwin Swales (M7) (N2-Titren) (19)	E	34.6	34.6		
Bayhead Rd Ext. over S. Freeway (20)	C	36.3	3.3	33.0	
Five Year Programme Total				**33.0**	

Note 1) E = eThekwini Municipality
C = Public/Public combo or Public/Private combo

6.3.3 Economic Impact Focused Projects, Bottleneck Elimination and Safety

The projects in Table 6.3 address bottlenecks and missing links/connectivity in the system which cause accessibility problems, negatively impacting on economic activity in the City. Some of the bottlenecks are localised and in resolving the problem spare capacity in the surrounding road network can be utilised. In some of these bottleneck locations safety is also a related issue as well as being a consideration on its own merit.

Safety, Bottleneck ellimination & Economic development

The costs of these projects range from low cost projects (generally with localised impact) to high cost projects which release potential and address accessibility problems in a much wider area.

Table 6.3 Economic Impact Focused Projects, Bottleneck Elimination and Safety

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
M4/Quality Street Interchange (21)	E	30.0	12.5	17.5	
N3 lane balance between N2 & Westville Interchange (22)	S	20.0		20.0	
N3 lane balance between Westville I/c & Paradise Valley I/c (23)	S	5.0		5.0	
Lighting along N2 (Durban Outer Ring Rd) (24)	S			32.0	
Lighting along N3 (Candella Rd — Mariannhill Plaza) (25)	S			9.0	
Hans Dettmann/Wiltshire Rd intersection (26)	K	2.0		2.0	
Stanger St/Argyle Rd Interchange (27)	E	65.0		65.0	
Musgrave Rd & Essenwood Rd one way pairing (28)	E	1.5		1.5	
Higher Order Road Rehabilitation (29)	E	98.0		98.0	
N2 Interchange Upgrades — short term (30)	C	5.0 + NDOT		5.0 + NDOT	
Nandi Dr-North Coast Rd to Malandela Rd (2+2 Lanes) (31)	E	40.0	10.0	30.0	
Cannongate (elevated) — Inbound (32)	E	97.5		97.5	
Cannongate (elevated) — Outbound (33)	E	101.0		101.0	
Berea and N-S Link (34)	E	27.0		27.0	
Booth Rd (M32) N3 to Francois Rd (35)	E	70.0		70.0	
Francois Rd (M32) — Booth Rd to University (35)	E	8.0		8.0	
North Coast Rd (R102) Upgrade — Verulam to Phoenix (36)	E	25.0		25.0	
South Coast Rd (R102) from Bayhead to Blamey (37)	E	4.0		4.0	
North Coast Rd through Mt Edgecombe (36)	E	15.0		15.0	
Umhlanga Rocks Dr/Northway Intersection (38)	E	5.0		5.0	
Improved connections from Newlands W. Dr. (M23) to MR577 (39)	E	5.0		5.0	
Inanda Rd (M21) at NPC factory (40)	E	8.0		8.0	
Five Year Programme Total				**650.5**	

Note 1) E = eThekwini Municipality
S = SANRAL
K = KZNDOT
C = Public/Public combo or Public/Private combo

Table 6.3 Economic Impact Focused Projects, Bottleneck Elimination and Safety (Continued)

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Post 2010 Projects					
N2/Booth Rd I/c & roadworks (41)	C	70.0			70.0
St Johns Rd (M19) upgrade (42)	E	13.0			13.0
Bellville Rd/M7 Intersection (43)	E	10.0			10.0
N2/Adams Rd I/c (44)	S	66.0			66.0
N2 (Mt Edgecombe to Sibaya I/c) (45)	S	1.0			1.0
N2/Cornubia interchange (46)	S	30.0			30.0
N2 widening (Sibaya to La Mercy) (47)	S	80.0			80.0
R102/Phoenix Highway interchange upgrade (48)	E	7.0			7.0
Cornubia Arterial from Phoenix Highway to Cornubia I/c (49)	E	100.0			100.0
Inanda Rd (M21) (50)	E	5.0			5.0
Bayhead-Edwin Swales Link Road (51)	E	TBA			—
Post 2010 Programme Total		**382.0**			**382.0**

Note 1) E = eThekwini Municipality
S = SANRAL
C = Public/Public combo or Public/Private combo

6.3.4 Public Transport Related Roads Projects

The projects in Table 6.4 are existing heavily trafficked public transport routes that require maintenance and upgrading to more effectively handle the demand. **Public transport**

Table 6.4 Public Transport Related Roads Projects

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
Southern Freeway Rehabilitation (52)	E	55.0	20.0	35.0	
Western Freeway Rehabilitation (53)	E	90.8	3.8	87.0	
North Coast Road — from Stanhope Rd to Blackburn Rd (54)	E	85.0			
Five Year Programme Total				**122.0**	
Post 2010 Projects					
P197 (M14) from R603 to M35 (55)	E	25.0			25.0

Note 1) E = eThekwini Municipality

6.3.5 Capacity Related Roads Projects

The projects in table 6.5 relate mostly to areas where there are currently or projected to be within the 2020 roads programme major capacity problems on a section of the system, as opposed to localised bottlenecks. **Capacity**

Table 6.5 Capacity Related Roads Projects

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
Outer West Road Improvements (56)	E	60.0	3.0	57.0	
Point Rd/Shepstone Rd one way pairing (57)	E	135.0	-	135.0	
Brickfield Rd Upgrading — Sparks Rd to N3 (58)	E	32.0	-	32.0	
Cato Manor Arterial North (M10) — N3 to Booth Road (58)	E	63.0	-	63.0	
Cato Manor Arterial South (M10) — N7 to Booth Road (58)	E	73.0	-	73.0	
Inanda Arterial West (59)	E	70.0	-	70.0	
Inanda Arterial East (60)	E	70.0	-	70.0	
N2 Re-hab & capacity upgr. (EB Cloete-Umhloti I/c) (61)	S	63.0		63.0	
Interchange capacity upgrades (Higginson H'way-Umhlanga I/c) (62)	S			(part of 63.0)	
Capacity improvements (Candella Rd-M13) (63)	S			68.0(2)	
5 Year Programme Total				**631.0**	
Post 2010 Projects					
M33 (Kloof Falls Road) connection to M13 (64)	E	4.0			4.0
Aliwal/Walnut (65)	E	100.0			100.0
N2 (Amanzimtoti to Prospecton) (66)	S	30.0			30.0
R102 (Tongaat to Verulam) (67)	E	20.0			20.0
MR360/1 (M13 to N3) (68)	E	100.0			100.0
M41 (Umhlanga Rocks Dr to M4) (69)	E	10.0			10.0
Hans Dettman Highway (M34) (70)	E	20.0			20.0
M4 (Virginia to Athlone) (71)	E	120.0			120.0
Stapleton Corridor (M5) (72)	E	40.0			40.0
Umhlathuzana Arterial & N2 interchange (73)	S	660.0			660.0
Post 2010 Programme Total		**1104.0**			**1104.0**

Note 1) E = eThekwini Municipality
S = SANRAL
2) Budget valid only if Mariannhill toll route extended to Candella Rd

6.3.6 Roads Projects to Support Key City Projects

The following roads projects will only proceed if and when the Key City project they relate to is initiated, generally with support of extraordinary funding.

Key city projects

Table 6.6 Roads Projects to Support Key City Projects

Project Description	Responsibility(1)	Est Cost (R mill's)	Programme Expenditure (R mill) 2004/05	5 Yr ITP	Post 2010
Current + 5 Year ITP Programme					
La Mercy I/c on N2 freeway with link to R102, as part of new King Shaka airport & iDube Tradeport (74)	S	40.0	40.0		
5 Year Programme Total		**40.0**	**40.0**		
Post 2010 Projects					
Unity Bridge of Harbour (75)		2000.0			2000.0

Note 1) E = eThekwini Municipality
S = SANRAL
C = Public/Public combo or Public/Private combo

6.4 Programme Summary by Category

Table 6.7 shows a summary of estimated capital expenditure by project category in the short term five year programme and from 2010 to 2020.

Table 6.7 Roads Programme Expenditure Estimate to Year 2020

Category Focus	No of Projects	Expenditure Est. (R millions) 2005/06 — 2009/10	Post 2010
1. Accessibility	20	545	610
2. Freight(1)	2	33	—
3. Safety, Bottleneck Removal & Economic Development	32	651	382
4. Public Transport(2)	4	122	25
5. Capacity	19	631	1104
6. Roads Projects to Support Key City Projects(3)	2	40	2000
TOTAL PROGRAMME	**79**	**2022**	**4121**

Note 1) Additional projects will be identified on completion of future phases of the Freight Plan
2) Additional projects will be identified for Post 2010 as detailed planning of PT system progresses
3) Additional projects could be identified in support of future Key City Projects

6.5 Project Descriptions

The following are brief descriptions of the projects scheduled in Tables 6.1 to 6.6, cross-referenced to the numbers shown in the tables.

6.5.1 Accessibility Projects

Accessibility projects

(1) Nazareth Residential Roads

(2) Carick Road Upgrade Incl. New Bridge

This project entails the realignment of a portion of Carrick Road and the construction of a new dual carriageway bridge to replace the existing single lane bridge. This will eliminate existing bottlenecks and improve safety along this section, of this metropolitan route.

(3) Intake Road Bridge

(4) Dassenhoek Rural Roads

(5) Matwabula Road Upgrade

(6) Rural Community (EPWG) Roads Prog. (Phase 2)

This programme consists primarily of improving accessibility to/from rural areas, either by introducing new access roads or upgrading substandard roads to all-weather surfacing.

(7) New Major Road MR577 from KwaDabeka to Duffs Rd

The construction of MR577 will provide the missing direct connection between KwaMashu, Inanda and other residential areas to the north and the major employment areas in Pinetown and New Germany in the west. Similarly, residential areas in the Inner

West, Outer West and South will have easier access to employment areas in the north. Much of the demand between these areas will be from lower income public transport dependent commuters. This road will also provide relief to the N2 and various interchanges along this freeway.

(8) Rural Community (EPWG) Roads Prog. (Phase 3 and 4)

This programme consists primarily of improving accessibility to/from rural areas, either by introducing new access roads or upgrading substandard roads to all-weather surfacing.

(9) D403 Ext — Inanda to R102 Verulam

This extension provides a bypass to Phoenix residential areas whilst improving accessibility to planned housing projects. It could also be an important public transport route in the future local area service network to the north.

(10) M30 from Umbumlulu to Mangosuthu Highway in Umlazi

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(11) M40 from M61, between Umbumbulu & Shongweni Dam

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(12) M28 from Inanda Dam to Hazelmere Dam

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(13) M48 (Wiltshire Road)

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(14) P529 (M53) Craigieburn

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(15) P98 (M25) from Redcliffe to Amatikwe

This route has been identified and integrated into the metropolitan route system (M routes). The proposal is to improve basic access by upgrading this route from gravel to blacktop. Improving this network of roads improves the quality of life for residents, enhances public transport services and general mobility throughout the municipal area.

(16) M4 — Grimsby Link (thru racecourse)

This link has been identified to support the future redevelopment of the Clairwood Race Course. Should the size and scale of land use warrant access Southern Freeway, the best road network improvement will be the extension of Grimbsy Road (M1) through to the Southern Freeway (M4).

The SDB ABM has identified this link as critical to the SDB. It forms an important east-west link and increases opportunity for access onto the N2 Freeway northbound or southbound.

(17) KwaMakhutha Access Road

This project is the upgrade of the road from the KwaMakhutha off-ramp at the N2 Freeway through to KwaMakhutha.

(18) Industrial Access Rd at Existing Airport

Road infrastructure to support the redevelopment of the Durban International Airport site and other land uses in the Southern Durban basin.

6.5.2 Freight Movement Focused Projects

(19) Edwin Swales Drive

Edwin Swales Drive is one of the heavily trafficked freight routes from the harbour to the N3 freeway. The proposed widening of this road will significantly improve harbour accessibility for road freight hauliers and other general traffic.

Freight movement projects

(20) Bayhead Road Extension over Southern Freeway

This extension over the Southern Freeway (new Khangela Bridge) will provide direct access to Edwin Swales Drive via Sydney and Umbilo Roads and will bring relief to South Coast Road and in turn the Southern Freeway. Traffic conditions at the highly congested unsafe intersection of South Coast Road and Edwin Swales Drive will also be greatly improved.

6.5.3 Safety, Bottleneck Elimination and Economic Impact Roads Projects

(21) M4/Quality Street Interchange

It is recognised that the South Durban Basin (SDB) is in decline. It is vital (from a transportation and economic viewpoint) to regenerate this area. An identified way of achieving this aim is to upgrade the capacity and visual impact of transportation access to this area. In this regard the Quality Street Interchange on the Southern Freeway (M4) is seen as a high impact, highly visible project giving effect to this objective. **Safety/bottleneck eliminatin/ economic impact**

(22) N3 Lane Balance between N2 & Westville Interchange

Localised capacity limitations. The elimination of the bottleneck by proving additional capacity, resulting in benefits overall and hence a highly effective way of improving the road network.

(23) N3 Lane Balance between Westville Interchange & Paradise Valley Interchange

(See No. 22)

(24) N2 Lighting

This project consists of providing high mast lighting along the heavily trafficked Durban Outer Ring Road section of the N2 in order to improve safety in night time conditions.

(25) N3 Lighting

This project consists of providing high mast lighting along the heavily trafficked section of the N3 from Candella Road to the Mariannhill Toll Plaza in order to improve safety in night time conditions.

(26) Hans Dettman/Wiltshire Rd Intersection

This is a serious localised congestion point requiring an upgrade of this intersection.

(27) Stanger St/Argyle Road Interchange

The existing intersection of M4/Argyle Road experiences both capacity and safety problems. The proposed interchange will address both these problems and improve access to the Sun Coast Casino and other key development projects in this area.

(28) Musgrave and Essenwood Roads

These roads are heavily congested arterials serving a concentration of commercial activity on the north side of Berea Road. This has now been converted as a one-way pair.

(29) Higher Order Road Rehabilitation

This is an essential part of the major roads programme strategy to avoid deterioration, and maintain safety standards and capacity thereby delaying need for additional road construction. **Safety/bottelneck elimination/ economic impact**

(30) N2 Interchanges

Although a number of large scale road infrastructure projects are planned to alleviate the congestion problems experienced at some of the interchanges on the N2, short term (low cost) improvements have been identified in the interim to maintain acceptable operating conditions.

The interchanges being considered are: —

- Higginson Highway/N2 Interchange (M1)
- Edwin Swales/N2 Interchange (M7)
- Umgeni-Inanda/N2 Interchange (M19 & M21)
- KwaMashu/N2 Interchange (M25)

(31) Nandi Drive (M45)

This link will connect Malandela Road in KwaMashu to MR577 and the N2 at Effingham Interchange and extend through to North Coast Road.

(32) Warwick By-pass (elevated) — Inbound

The primary focus of this project is the restructuring and the re-organisation of the public transport facilities and activities in the Warwick precinct. The first major intervention is

the separation of the through traffic component from this area. The main benefits are reducing congestion, vehicular/pedestrian conflict and enhancing public transport operations.

(33) Cannongate (elevated) — Outbound

Safety/bottelneck elimination/ economic impact

The primary focus of this project is the restructuring and the re-organisation of the public transport facilities and activities in the Warwick precinct. The first major intervention is the separation of the through traffic component from this area. The main benefits are reducing congestion, vehicular/pedestrian conflict and enhancing public transport operations.

(34) Berea and N-S Link

(35) Booth and Francois Roads

The Booth Road/Francois Road projects are now complete. Apart from satisfying local access needs these projects improve the accessibility of Cato Manor and upgrade connectivity of the road system in this part of the City.

(36) North Coast Road (R102) from Mt Edgecombe to Verulam

Increased employment in areas to the north, the large residential areas in Waterloo and Tongaat and the construction of MR577 will add considerable traffic to the R102 north of the KwaMashu Highway (M25).

This route already has capacity problems: —

• Through Mount Edgecombe to Phoenix Highway (M47);

• From Phoenix Highway (M47) to Verulam

These sections of the R102 need to be upgraded if development in this area is not to be artificially constrained.

Recommended road network improvements including widening through Mount Edgecombe to a 4-lane facility (as currently planned by the Provincial Authorities).

(37) Old South Coast Road

Safety/bottelneck elimination/ economic impact

This arterial road between Edwin Swales (M7) and Blamey Road is narrow and carries large volumes of heavy vehicles related to harbour activities. Notwithstanding the benefits of the Bayhead Road extension, this section of road requires localised upgrading.

(38) Umhlanga Rocks Drive/Northway Intersection

Upgrading of this critical intersection is predominantly a TSM project geared towards improved management of traffic.

(39) Newlands West Drive

The residential collector of Newlands West Drive (M23) needs good connections to MR577 from both the east and west to ensure effective utilisation of MR577 and distribution of trips in the area.

(40) Inanda Road (M21) Realignment at NPC Factory

This is a localised bottleneck near the NPC factory that causes serious congestion in the area. A plan exists to re-align Inanda Road through this area.

(41) N2/Booth Road Interchange

The proposed Booth Road interchange on the N2 is a critical point of access from the regional road network to the Cato Manor area. Implementation of this project remains subject to the approval of the National Roads Agency who are not supportive of this proposal due to their concern over some of the technical aspects.

(42) St Johns Avenue (M19) Upgrade

Localised capacity restrictions along St Johns Avenue (M19) in Pinetown negatively impact on Pinetown's CBD. In particular the intersection of M19 with Old Main Road is a major contributing factor. Various improvements are proposed to address these problems.

43) Bellville Road/M7 Interchange

Safety/bottelneck elimination/ economic impact

The Bellville Road interchange on the M7 serves a large catchment area in Queensburgh and Chatsworth providing access to Edwin Swales (M7) and ultimately the N2. This interchange is currently a bottleneck in the road network. Localised improvements to this interchange are proposed.

(44) Adams Road/N2 Interchange

This interchange is needed to upgrade the existing low standard interchange and give access to a proposed regional shopping centre.

(45) Sibaya/N2 Interchange

This is one of several interchanges on the N2 freeway (see also project — La Mercy interchange) north of the Umgeni River needed to support developing employment centres to the north. They are essential, as local roads alone are inadequate to support the expected development. These interchanges will be partly or fully financed by the developers.

(46) Cornubia/N2 Interchange

This future interchange is part of the upgraded access solution needed to accommodate future expected growth in the Umhlanga Ridge/La Lucia Ridge/Mount Edgecombe area.

(47) N2 Widening from Umhlanga to La Mercy

Widening of the N2 from the proposed Sibaya interchange to La Mercy interchange is part of the road network upgrading in the area to provide capacity and increased accessibility to expected development at the new airport and in the area between the Umhlanga River and Umdloti.

(48) R102/Phoenix Highway

The R102/Phoenix Highway upgrade is one of the projects in a package of improvements to enable the R102 to cope with additional traffic generated by growing employment areas to the north and increased distribution needs associated with the construction of MR577. **Safety/bottelneck elimination/ economic impact**

(49) Cornubia Arterial

The proposed Cornubia Arterial from a proposed interchange on the N2 through to Phoenix Highway is part of a longer term road system.

(50) Inanda Road

(51) Bayhead-Edwin Swales Link Road

New access road into the Bayhead area.

6.5.4 Public Transport Related Roads Projects

(52) Southern Freeway Rehabilitation

(53) Western Freeway Rehabilitation **Public transport roads projects**

The Western Freeway from N2 to Ridge Road carries the highest traffic volumes in the metro area. High levels of congestion seriously impact on accessibility to the central area and reduce the attractiveness for existing land owners and future developers.

Heavy public transport volumes in mixed traffic are also delayed by the congestion along with private motorists. Localised widening and rehabilitating this section of the Western Freeway where the pavement structure is badly deteriorated and currently failing in many locations, will benefit all categories of traffic, improve accessibility and help to revitalise the central area.

(54) North Coast Road Upgrade

The upgrade of this arterial to six lanes between Blackburn Road and Stanhope is nearing completion. This heavily trafficked arterial is the largest carrier of road based public transport from residential areas in the north to employment opportunities south of the Mgeni River.

(55) MR197 (M4)

High population growth is expected at Lovu and KwaMakhutha and the upgrade of this arterial from R603 to the M35 is needed for this important public transport feeder route to Isipingo, where there is a major public transport transfer point to rail. This is seen as an important road in support of the North-South PT Corridor operation. **Public transport roads projects**

6.5.5 Capacity Related Roads Projects

(56) Outer West Road Improvements

Current capacity problems in the Western Area are largely focused on the predicted growth in residential and commercial development. Inanda Road, Old Main Road and other key intersections will be improved.

(57) Point Rd/Shepstone Rd one way pairing

The construction of the Point/Shepstone one-way pairing is required to provide access to the Point development and improve traffic conditions along the beachfront. This road will also be part of the public transport circulatory system being considered for the CBD. **Capacity related roads projects**

(58) The M10 (Brickfield-Cato Manor- Bellair Road)

This corridor between Edwin Swales Drive in the south and Sparks Road in the north is critically deficient and impacts negatively on the central area road network. The upgrade/completion of this key link in the road network will complete and enhance the

road network in the Booth Road/Francois Road/Cato Manor area relieving congestion and significantly improving accessibility to and movement through Cato Manor.

(59) Inanda Arterial West (M21)

Widening of the Western section from Marbleray westwards.

(60) Inanda Arterial East (M21)

Improving capacity from the N2 to North Coast Road.

(61) N2/25 Improvements (EB Cloete I/c to Umhloti I/c)

This consists of pavement rehabilitation along with interchange capacity improvements where growth in demand is resulting in congestion and reducing safety standards.

(62) N2/25 Improvements (Higginson H'way I/c to Umhlanga I/c)

This is an extension of the contract in project 60 to complete interchange capacity improvements along this section of the freeway. **Capacity related roads projects**

(63) N3/1 Upgrade (Candella Rd to M13)

(64) M33 (Inanda Rd Hillcrest) between R103 and M13

The upgrade of this arterial together with the construction of east-facing ramps onto the M13 provides a key, direct route from Waterfall/Hillcrest onto the M13 which will reduce the impact of traffic on the local road system.

(65) Aliwal/Walnut Streets

These roads in the CBD require various improvements and upgrading if movement to and through this area is to be maintained at a reasonable level and good access to the expanded ICC development is to be maintained.

(66) N2 Freeway from Amanzimtoti to Prospecton

This is one of the sections that needs widening to a 6 lane freeway standard to improve south-north mobility and accessibility to major work areas.

(67) R102 from Tongaat to Verulam

This section of this important north-south arterial needs to be widened to provide capacity and support for the proposed La Mercy airport and iDube Tradeport.

(68) MR360/1 from M13 to N3

This arterial connection from the Waterfall/Hillcrest area to the N3 features in each of the alternative road system options evaluated in terms of serving development in the Outer West.

(69) M41 from Umhlanga Rocks Drive to the M4

This arterial road requires widening from three lanes (2+1) to a four lane cross section as part of the future road network needed to serve this area. **Capacity related roads projects**

(70) Hans Dettman Highway (M34)

This arterial forms part of the "Stapleton Corridor" which in the long term is needed to rationalise the road network and traffic movements in this area. Upgrade of this road is proposed from the M5 to Higginson Highway (M1).

(71) The Northern Freeway (M4) from Virginia to Athlone

This section of the M4 experiences considerable congestion and in view of the shift in travel patterns (increased south to north travel), widening of this section is proposed in the longer term.

(72) Stapleton Corridor (M5)

The current proposal for this route in the longer term is a down-graded scheme from that proposed in pre-2000 planning. Hans Dettman Road (project 70) forms a part of this corridor which is planned as a four lane arterial.

(73) Umhlathuzana Arterial & N2 Interchange

New interchange at Coedmore and plus a new arterial from South Coast Road to N2.

6.5.6 Key City Initiative Support Projects

(74) The La Mercy/N2 interchange

This is a key point of access from the primary regional road network to the proposed King Shaka international airport and the adjacent iDube Tradeport. **Key city initiative support projects**

(75) Unity Bridge

The prospect of a bridge over the harbour as a direct route from the south into Durban's CBD would have major benefits in terms of transport, but the cost of this is a major draw-

back. This project currently has a low priority but is included on the basis of a possible Private/Public Partnership (PPP).

7 ROAD SAFETY

7.1 Introduction

Road safety is a cornerstone of any Integrated Transport Plan as it has a dramatic impact on the potential Quality of Life for many residents, both young and old.

Apart from the social impact on individuals and families, road accidents have a major impact on the economy of the county. The World Health Organisation projects traffic accidents as the 2nd leading cause of disability — adjusted life by year 2020. In South Africa alone in Year 2001, 8 754 people died in road traffic accidents and in all there were 470 000 collisions costing the country R14 billion.

In spite of various initiatives including road safety programmes such as Asiphephe and Arrive Alive road fatalities continue to increase throughout the country as shown in Figure 7.1.

Accident trends

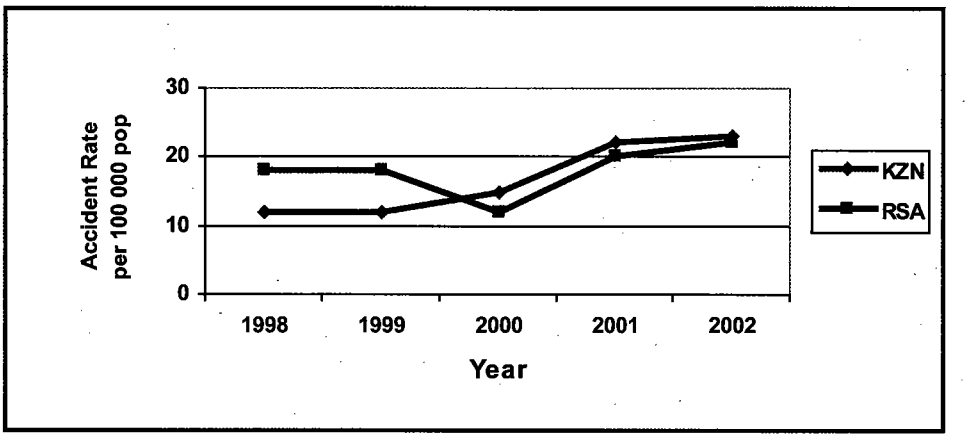


Figure 7.1: Accident Trend in KZN and South Africa

During 2001, 51% of traffic accidents in South Africa occurred in the eight largest urban areas including eThekwini where fatal accidents and serious injuries also indicate an upward trend. The figures shown in the following table over a ten year period show 6 400 deaths, 1 200 of these being children. In addition there were 30 000 serious injuries costing eThekwini some R14 billion.

Table 7.1 Ten Years of Traffic Accidents in eThekwini

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Deaths	599	645	717	620	603	633	545	608	710	742
Serious injuries	2386	2498	2337	2336	2600	2848	3195	3710	3840	3791
Total Cost R millions	**692**	**1020**	**1103**	**1211**	**1274**	**1376**	**1534**	**1769**	**2007**	**2241**

eThekwini's Vision Statement declares its intention to be 'Africa's most caring' and liveable city.

eThekwini recognises the threat of road accidents to achieving this objective and has taken a serious structured approach to address this challenge in the form of a comprehensive Road Safety Plan.

This section of the ITP highlights key aspects of the Safety Plan which is appended to this report.

7.2 Basic Principles for Developing the Road Safety Plan

The following are the basic principles adopted by eThekwini in the preparation of their Road Safety Plan: —

- the Plan must be appropriate in the eThekwini context.
- strategies in the Plan must be developed from a thorough analysis of road accident patterns and causes, with the expectation that the more accurate and detailed the data is, the more focussed the strategies can be.
- the road safety strategies need to be multi-disciplinary and include all stakeholders if they are to be effective.

Basic principles in preparing the Plan

- the plan has to be realistic in what it aims to achieve within current financial and resource constraints. It recognises that it is unlikely that there will be any immediate significant increase in resources.
- whilst being realistic, the Plan must assess and define the entire range of strategies and actions that need to eventually be implemented. These actions need to be prioritised according to resource constraints.

• To address road safety effectively, peoples values, culture and habits need to be changed.

In adopting these principles it is recognised that many of the crucial strategies that have to be implemented immediately are unlikely to produce dramatic short-term results, but they are absolutely critical in achieving sustainable long-term change.

Recognising that this is a process that takes time, the Plan needs to put foundations in place and then gradually build upon them.

7.3 Assessment of the Current Accident Situation

The assessment in this section was developed from annual accident summaries produced by the eThekwini Road Safety Branch.

The objective of the assessment was to define target areas for enforcement, publicity and education campaigns, by identifying: —

• which road user groups are involved in accidents in which areas

• which road user groups are involved in accidents on which major road sections

• the age profiles of drivers and pedestrians involved in accidents.

Road user groups identified for investigation were: —

Road user groups investigated

• All Road Users

• Pedestrians

• Minibus Taxis

• Buses

• Heavy Vehicles

• Light Delivery Vehicles/Bakkies

• Cars

7.3.1 Total Accidents

A summary of total accidents in eThekwini in year 2001 for each of the road user groups is shown below.

Road User Groups	Total Accidents
Pedestrians	7 478
Minibus Taxis	9 757
Buses	2 962
Heavy Vehicles	5 026
Light Delivery Vehicles/Bakkies	17 403
Cars	56 987
Total	**99 613**

Figure 7.2 shows the overall accident occurrence in each area within the eThekwini Municipal Boundary. The area with the highest accident occurrence is the Durban CBD. The five worst areas as highlighted are: —

Five worst areas overall

• Durban CBD

• Morningside

• Umlazi

• Chatsworth

• Pinetown

7.3.2 Pedestrian Accidents

The adjacent pie chart shows the deaths by different user groups, highlighting the most vulnerable group as being pedestrians. Overall, children under 10 years of age and young male drivers under the age of 30 years are seen to be the most vulnerable.

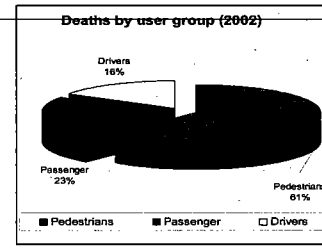


Figure 7.3 shows the five worst areas for pedestrian accidents; these being: —

Five worst Pedestrian accident areas

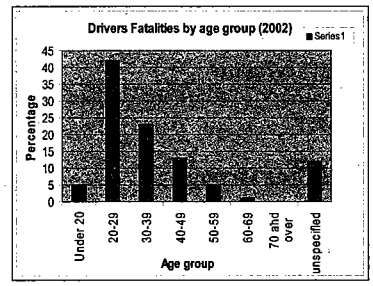
- Durban CBD
- Umlazi
- KwaMashu
- Chatsworth
- Phoenix

Of these areas, accidents in Umlazi had the highest severity, although the CBD had a greater number.

The pedestrian accidents in Umlazi, KwaMashu, Phoenix and Chatsworth were characterised by a significant involvement of children under the age of 10 years old. Twenty percent of all pedestrian accidents in these areas involved children under the age of 15 years. In the Durban CBD the 20-29 age group had the highest involvement in pedestrian accidents.

7.3.3 Driver Fatalities by Age Group

The graph for driver fatalities by age group highlights the under 30 male drivers as the highest risk group with accidents typically associated with speeding, driving whilst under the influence of alcohol and drugs, driving without a seatbelt, cell phone usage while driving, aggressive and reckless driving and driving home in the early hours in a fatigued and intoxicated condition. These dangerous behaviour patterns need to be the target of area-wide law enforcement and media campaigns.



Whilst this problem is endemic throughout the City it is

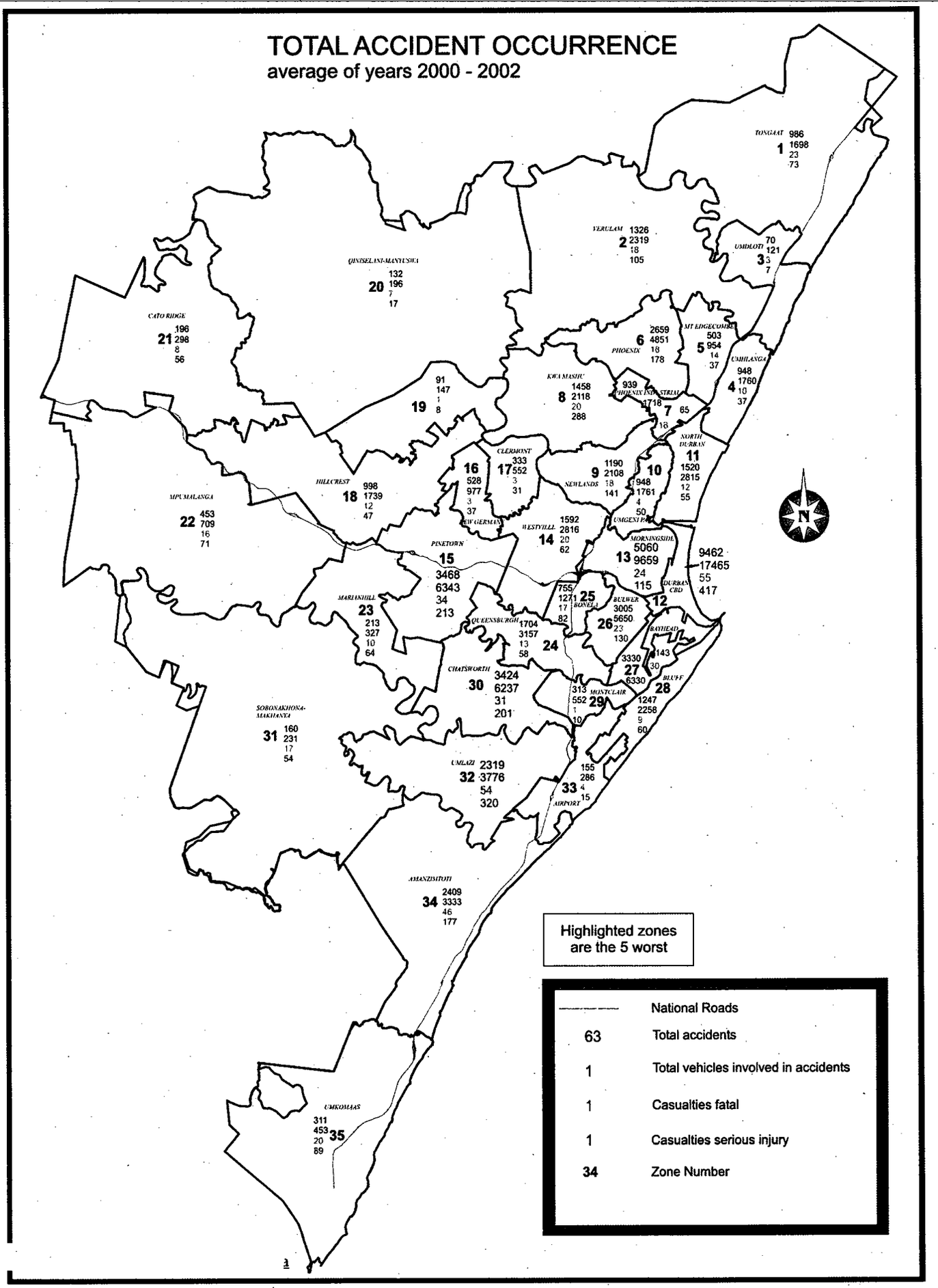


Figure 7.2: Accident Occurrence by Area

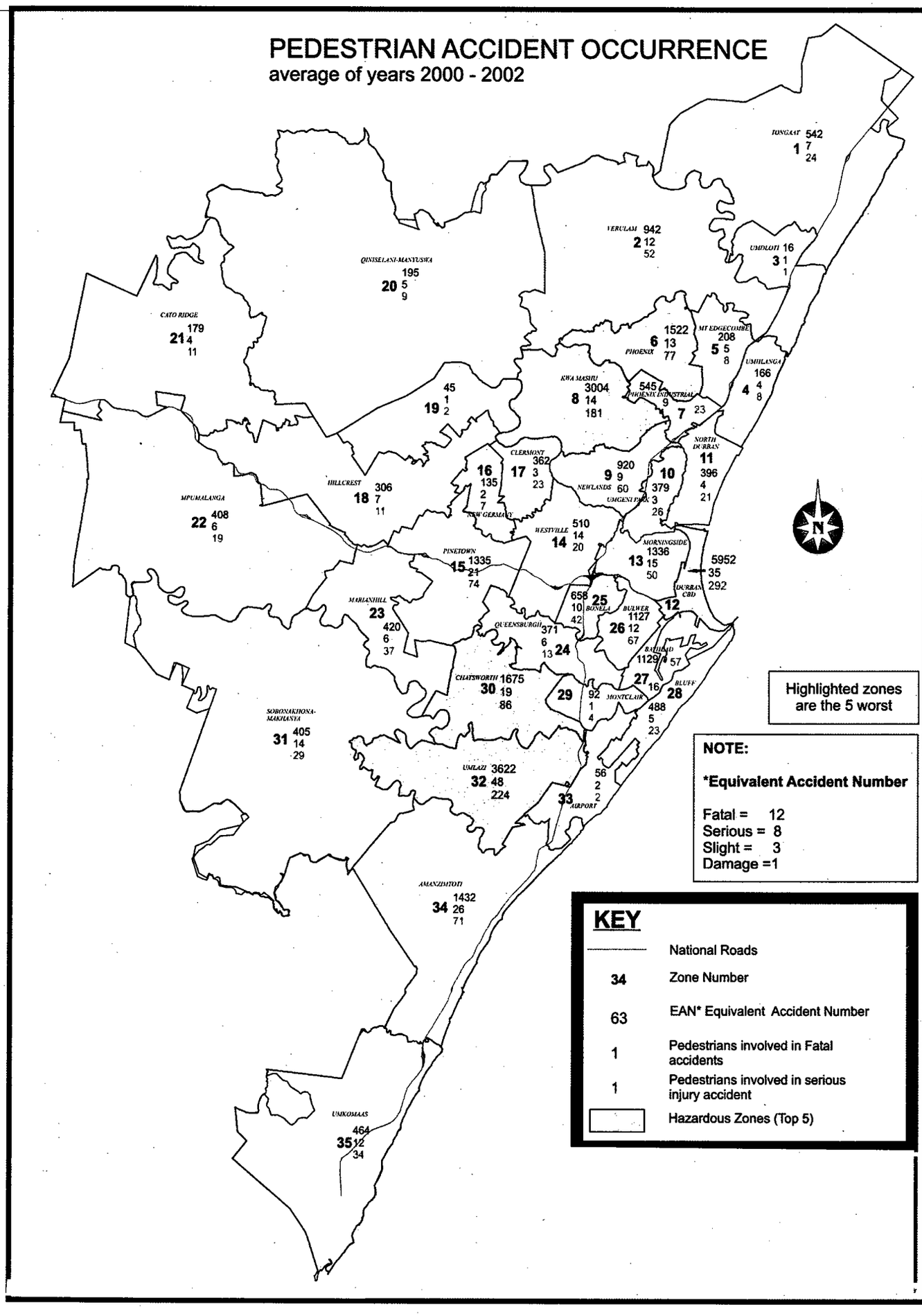


Figure 7.3: Pedestrian Accident Occurrence by Area

7.3.4 Minibus Taxi Accidents

The adjacent pie chart shows the extent to which minibus taxis are involved in accidents relative to other types of vehicles. The high incidence of this type of accident is made more serious by the fact that this mode carries public transport passengers with little to no protection in the event of a serious accident.

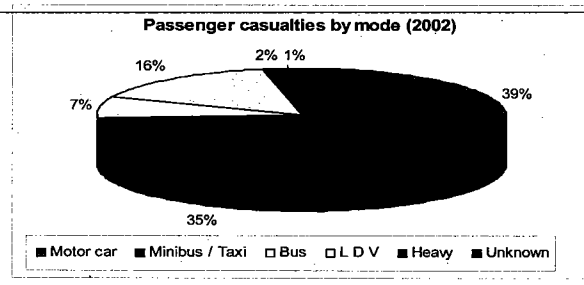


Figure 7.4 highlights the five worst areas for minibus taxi accidents. These areas are the same as those for pedestrian accidents except that Pinetown replaced Chatsworth in the worst five. The five areas are: —

Five worst minibus accident areas

- Durban CBD
- Umlazi
- KwaMashu
- Phoenix
- Pinetown

7.3.5 Worst Sections of Road

The five overall worst road sections per kilometer of roadway are shown in the following table.

Table 7.2 Worst Road Sections for Accidents

Worst road section

Road	Section	
	From	To
N2 Freeway	M19 Umgeni Rd Interchange	M21 Inanda Rd Interchange
R102 (South Coast)	Blamey Intersection	M7 Edwin Swales
M4 Old Dutch	M8 Botanic Gardens	Cross
M17 Argyle	R102 Umgeni	Playfair Rd
R102 Umgeni	Argyle	M4 Old Fort

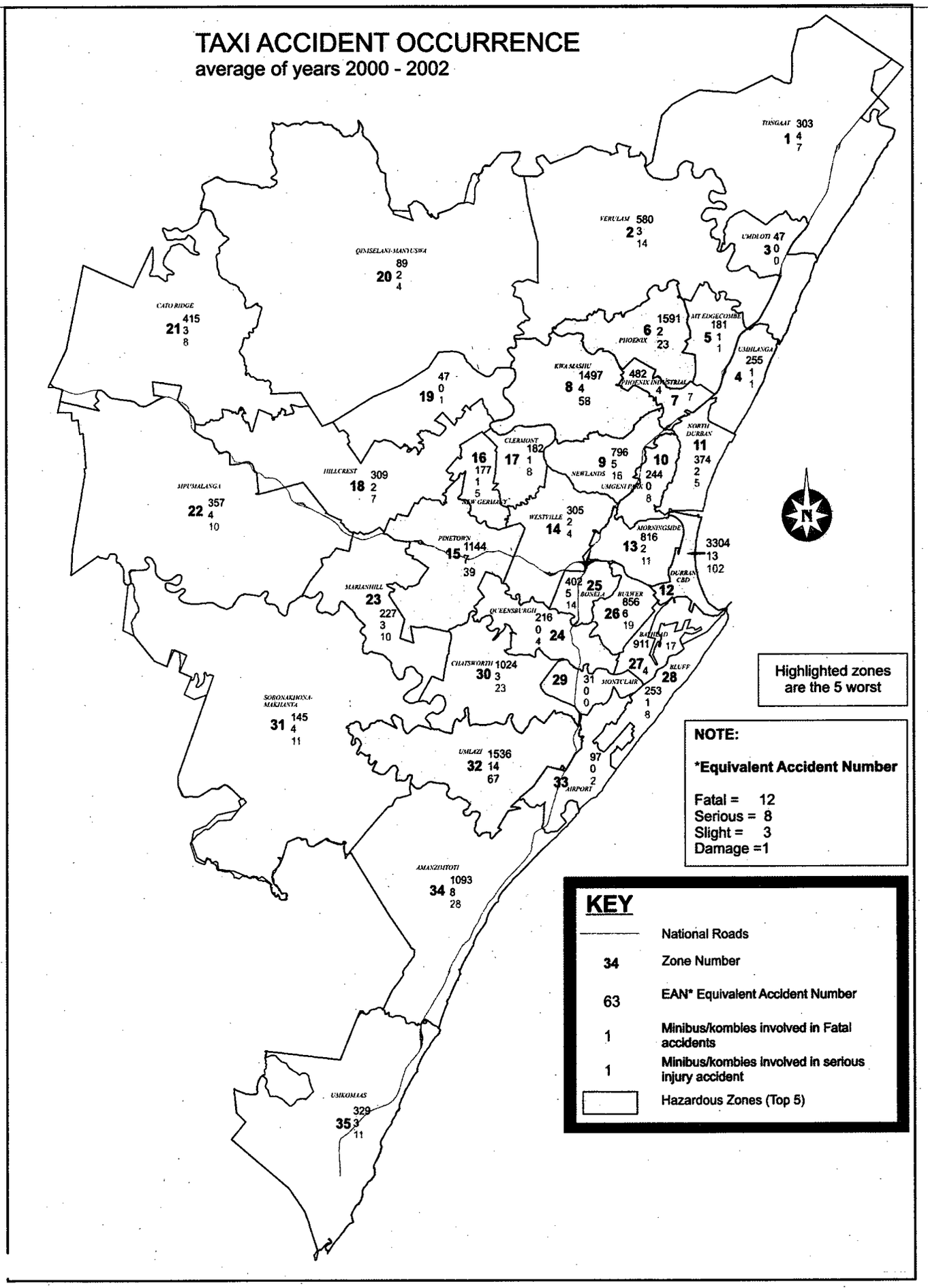


Figure 7.4: Minibus Taxi Accident Occurrence by Area

The number of accidents per road section based on a three year average in terms of equivalent accident numbers is shown in Figure 7.5. From this figure it is evident that most of the major road network experiences two or more accidents per week with extensive sections experiencing three or more per week. As shown by the red and purple sections of the road plan there are also significant sections experiencing between 14 and 16 vehicles per week.

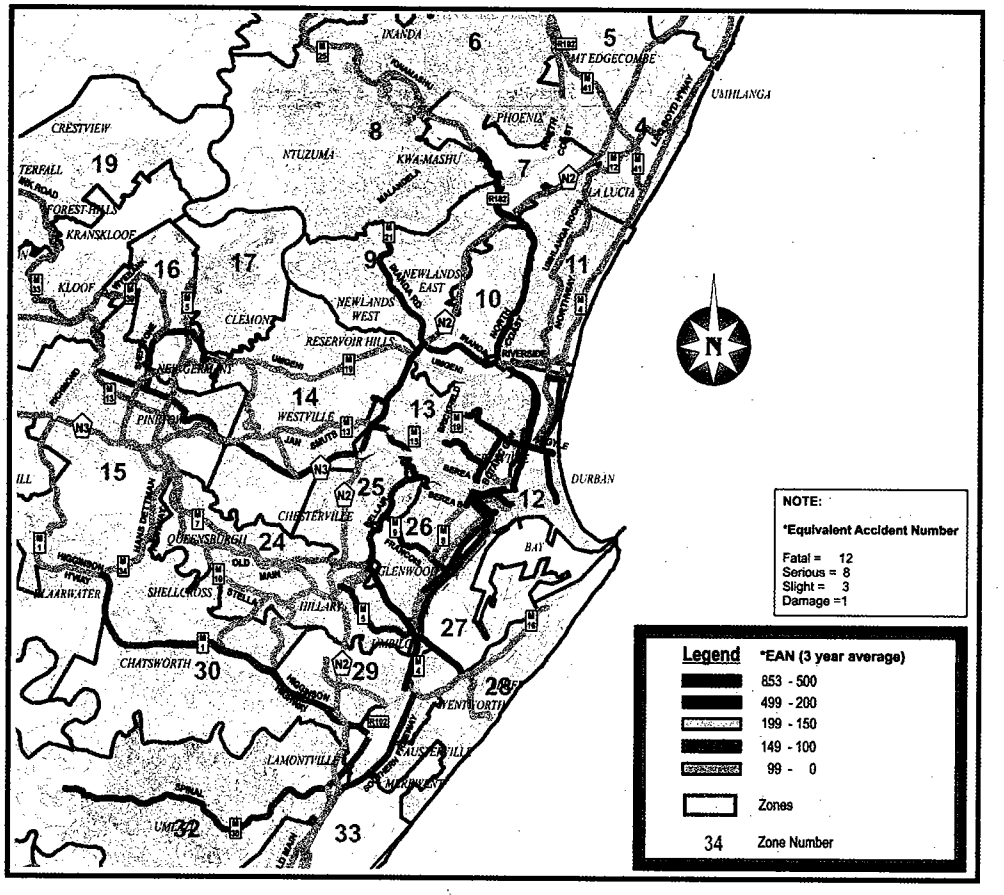


Figure 7.5: Worst Sections of Road System

7.3.6 Age Profiles of the Most Vulnerable Groups

Vulnerable age groups

Pedestrians are the most vulnerable of all road user groups. Within this group children are considerably more vulnerable to death and serious injury. In particular children under 10 years of age involved in a collision with a motorised vehicle, sustain the worst injuries as the height at which the impact occurs with their bodies causes severe damage to vital organs.

Male drivers under the age of 30 are the most vulnerable to accident involvement throughout eThekwini, and even more so in Phoenix. This age group is typically associated with speeding, driving whilst under the influence of alcohol and drugs, driving without a seatbelt, cell phone usage while driving, aggressive and reckless driving and driving home in the early hours in a fatigued and intoxicated condition. These dangerous behaviour patterns need to be the target of area-wide law enforcement and media campaigns.

Table 7.3 highlights the above findings also indicating the areas where the problems are the most prevalent.

Table 7.3 Vulnerable Road User Groups by Age and by Area

Age Group	Road User Group	Location
0-9	Pedestrians	Umlazi KwaMashu Phoenix Chatsworth
10-19	Pedestrians	Umlazi KwaMashu Phoenix Chatsworth
20-29	Pedestrians	Durban CBD
20-29	Drivers	entire municipal area

Vulnerable age groups

7.4 Current Road Safety Activities

This section summarises the key findings from an assessment of the current road safety activities and initiatives at national, provincial and local levels for all the sectors; namely, education, engineering, enforcement, emergency services, and evaluation. The results are summarized in the following paragraphs:

7.4.1 Education

The National Department of Transport in conjunction with the Provincial Department of Transport is responsible for the road safety education strategy and for the dissemination of road safety educational material to schools and communities through the provinces. Involvement of communities in road safety matters is actively encouraged. The road safety activities of the department are guided by the "Road to Safety Strategy" and include the ongoing Arrive Alive Campaign.

Education: activites & initiatives

The National Department of Education makes material available to the schools as part of a curriculum, but the quality and frequency of road safety education is dependent on the educator's motivation for the subject. The perception is that education stops after the introductory phase.

The KZN Department of Transport currently has seven road safety officers in its employ to run various road safety education and publicity campaigns. In addition to these seven, Community Road Safety Councils (CSRC's) have been established in line with the national department's endorsement of community involvement in road safety.

Community Road Safety Councils (CRSC's) currently operate in the following areas: —

- Kwamashu
- Umlazi
- Durban Metro (Umbumbulu)
- Albert Luthuli (includes Umhlanga, Tongaat, Verulam and Inanda)
- Cato Manor

Additional CRSC's are planned for, these being: —

Education: activites & initiatives

- Durban South (Chatsworth, Lamontville, Merebank)
- Outer West — Pinetown
- Inner West — Pinetown

According to the KZN — Department of Education, Road Safety is a compulsory part of the curriculum. However schools can adapt or extend the programme to their particular needs and interests. There is a lack of information regarding the specifics of what each school does.

eThekwini Municipality has 15 municipal Road Safety Education Officers (RSEO's) in the Durban Metropolitan Police Service (DMPS) deployed in road safety education in the 5 operational entities. All fall under different sections of the organizational structures in the various operational entities and as a result have different resources and priorities. These aren't necessarily road safety education.

Problems associated with the current situation are: —

Problems with current situation

- there is a general lack of dedicated resources in terms of staffing, vehicles, office space, equipment and funding;
- interdepartmental co-ordination at local level is an issue;
- there seems to be a lack of data on which schools have been visited, and which learners have been exposed to what material.

7.4.2 Engineering

The National Department of Transport is involved with planning and policy related to Road Safety Engineering. The implementing agency is SANRAL. Many of the projects have their origins from maintenance or capacity concerns and are motivated only in part by safety concerns.

Engineering: activites & initiatives

The KwaZulu Natal Department of Transport is responsible for on the ground delivery of Arrive Alive and this has included joint engineering-enforcement projects. Many of their engineering projects have been identified by community structures.

Within eThekwini Municipality at local government level, many of the implementation projects are safety related or have a strong safety element. Many are identified by councillors or members of the community and may therefore not go through the same technical procedures as other projects. This could result in the overlooking of other sites more needful of attention.

The following gaps have been identified:

Identified gaps

- Although a number of hazardous locations are identified each year, there is currently no formal municipal-wide hazardous location programme including a predetermined network screening and prioritization procedure.
- Road Safety is addressed reactively. There are few if any proactive road safety audits of new roads, public transport services and infrastructure, land developments and townships.

• There is a need for more 'Intelligence' in support of the road safety effort. Development of the Geographic Information System (GIS) is ongoing. Although the eThekwini accident data base on its own is arguably the best in the country, much work still has to be done to link the various systems, for example, traffic volume data, geometric data, accident data, offence rates etc into one information system that can provide customized support data to the various Road Safety Agencies.

7.4.3 Enforcement

Three organizations are involved in traffic enforcement matters in eThekwini:

• SAPS

• KZN DOT — Road Traffic Inspectorate (RTI) and Public Transport Enforcement Unit

• DMPS

Enforcement: activities & initiative

The general SAPS only attend traffic accidents to gather evidence and prepare cases of culpable homicide. At roadblocks, their presence is crime related. However, the SAPS: Accident Unit does involve itself in active traffic enforcement.

The RTI is involved in traffic law enforcement and attendance at accidents on national and provincial roads. Although they have jurisdiction on all KZN roads, they leave the local roads to the DMPS. The Public Transport Enforcement Unit consists of 40 members and has been formed as a response to taxi violence. They target mainly the "unlawful operator" who has failed to register his vehicle or fleet with the Transportation Board as well as those who have registered but fail to adhere to the conditions of their permits.

The function of the Durban Metropolitan Police Service is threefold: traffic policing, City Bylaw infringements and assisting the SAPS with crime prevention. They are meant to dedicate 60% to traffic law enforcement but crime prevention priorities intervene. Over and above the general force, there are 3 special units:

• Special Events Unit,

• Speed Timing Unit- 29 personnel

• Public Transport Unit — 15 personnel dedicated to public transport vehicle fitness, taxi and route permits, professional driving permits and taxi ranks

Identified gaps

The following is a summary of identified gaps: —

• difficulty with recovery of outstanding traffic fines

• no dedication to road safety and traffic law enforcement as core functions of policing

• lack of co-ordinated traffic law enforcement with SAPS Accident Unit, Durban Metropolitan Police Service (DMPS) and Road Traffic Inspectorate (RTI).

Enforcement: Identified gaps

• need for specialist traffic law enforcement personnel

• inadequate court capacity: cases are being struck off the roll due to overloading and can be delayed for up to 2 years.

• need for training in the principles of targeted law enforcement

• need for 'intelligence' to be made available to enforcement i.e. accident and offence rate data in support of strategic deployment

• insufficient capacity and resources

7.4.4 Emergency Services

Research has shown that once a road traffic accident has occurred, critical trauma cases are more likely to survive if they are treated within 60 minutes (also known as the 'Golden Hour'). Within eThekwini it was found that inefficiencies and current resource constraints are having a detrimental effect on the ability to attend to accident victims within the 'Golden Hour':

Emergency Services: problems

• Instead of one well-known number, there are numerous emergency numbers and call centres both public and private operating in the country.

• The eThekwini emergency number 031- 361 0000 is not a free call number.

• The most under-resourced of the emergency service providers is the provincial ambulance service. There is 1 ambulance per 111 000 people (the desirable international standard would be 1 per 10 000 people. Approximately 300 additional vehicles would be required to meet this standard with the accompanying additional staff to man them).

Emergency Services: problems

• Accident trauma patients have to be treated at a level 2 District Hospital. If patients are unconscious and cannot request an alternative, they are automatically taken to a level 2 government hospital. The existing district hospitals are already overburdened and the northern and outer west areas do not have one, resulting in patients having to be transported over longer distances.

• Allegations of corruption at call centres needs to be investigated.

• Each call centre provides a response. A lack of co-ordination and competition between public and private service providers, results in a waste of scarce resources as well as unsafe driving practices, as two or more vehicles race each other to the same accident scene.

• There is no single set of protocols that apply to all the service providers at the scene. It is unclear who manages the scene and there have been reports of serious disagreements.

• The various emergency service providers cannot communicate directly with one another, but must do so through their respective call centres, causing further delays.

• There is lack of data available regarding response times, both pre- and post hospitalization.

There is an urgent need for the issue of private versus public competition and the dire state of affairs regarding funding for emergency services to be dealt with by definitive policy and legislation at a national level.

7.4.5 Evaluation

There is no formal and independent "before-and-after" evaluation of road safety activities at any of the levels of government. That an activity was undertaken or a project implemented, is currently regarded as sufficient and 'successful'.

7.4.6 Summary

In summary it was found that: —

• there is a lack of effective co-ordination and integration of the road safety activities carried out by various organizations and at various levels of government.

• there is a lack of performance and outcomes measurement

• there is a lack of accountability with regard to road safety outcomes.

• there is insufficient supporting data to control and manage road safety

• institutional arrangements are complex and dysfunctional in some instances.

• there are insufficient dedicated resources for road safety. For example, in engineering, safety projects must often piggyback onto capacity related projects. In enforcement, crime prevention generally takes precedence. Most agencies are 50% understaffed.

These deficiencies mean that road safety does not easily enjoy the priority that it should within the various agencies. Activities are carried out on an ad hoc basis and are founded upon perceptions instead of the facts. A lack of co-ordination reduces the impact that integrated activities could have had and wastes limited resources.

In order to remedy the situation, a three pronged approach has been adopted: —

3 Key Thrusts

KEY THRUST 1:	Getting the Basics Right
KEY THRUST 2:	Road Safety Management Areas
KEY THRUST 3:	Focussed Area Wide Strategies

These are discussed in the following section.

7.5 Planning Strategies

This section highlights the planning strategies related to the three strategic thrusts of the Road Safety Plan.

7.5.1 Strategic Thrust 1: Getting the Basics Right

This thrust involves laying the foundations of the Plan which include: —

• dedicated institutional structures to respond to road safety

• co-ordination of the various institutional structures

• dedicated staff and funding

• information requirements

• road safety as a mandatory 21st century life skill

• citizenship

The following specific strategies for each sector, all form the foundation of the eThekwini Road Safety Plan.

Engineering Services:

Thrust 1: Getting basics right

The following strategies apply to this sector: —

Strategy 1:	Introduce a formal HAZLOC Programme
Strategy 2:	Develop a formal road network screening and prioritisation procedure
Strategy 3:	Carry out before and after studies of selected safety projects

Strategy 4: Develop an Information System

Strategy 5: Develop a formal audit and assessment programme

Education:

Strategy 6: Create a pool of dedicated Road Safety Education Officers

Strategy 7: Deploy equipped scholar patrols

Strategy 8: Develop a school's database addressing the visitation/ information/ education programme

Strategy 9: Train Road Safety Education Officers (RSEO's)

Strategy 10: Develop a programme to motivate RSEO's

Strategy 11: Support provincial CRSC's and monitor their effectiveness

Strategy 12: Use the KZN-DOT educational material and ensure availability to all schools.

Enforcement:

Strategy 13: Provide the 'intelligence' data for planning of targeted law enforcement campaigns

Strategy 14: Maintain equipment in a fully operational condition

Strategy 15: Create a smaller dedicated task force to compliment the general force

Strategy 16: Change the judicial process regarding recovery of outstanding fines

Strategy 17: Investigate linking the payment of outstanding fines to the re-issue of operating licences and rank permits for public transport vehicles

Strategy 18: Raise the profile and level of recognition of achievement in the profession

Strategy 19: Investigate the call/control centres for alleged corruption

Emergency Services:

Strategy 20: Set up co-ordination channels for all emergency service providers to establish voluntary co-operation

Strategy 21: Monitor the eThekwini call centre

Strategy 22: Provide a free call emergency number for eThekwini

Strategy 23: Obtain and evaluate response time data

Strategy 24: Introduce real time control of vehicle locations

Strategy 25: Investigate the contracting out of the private ambulance services

Exposure:

Strategy 26: Raise awareness of Road Safety through media campaigns

Strategy 27: Municipal employees to set the example for exemplary road user behaviour

7.5.2 Strategic Thrust 2: Road Safety Management Areas

The most vulnerable groups in eThekwini have been identified as follows: —

Thrust 2: Safety Management Areas

- Pedestrians of school going age
- Pedestrians in the 20-30 age group in the Durban CBD

The worst areas within the municipality are now identified as road safety management areas with a view towards specifically managing reduction of the incidence and severity of accident occurrence in these most vulnerable groups.

7.5.2.1 Pedestrians in the 5-9 and 10-19 Age Categories

The Road Safety Management Areas in respect of these groups are:

Pedestrians 5-10 yrs

- Umlazi
- Kwamashu
- Phoenix
- Chatsworth

The Road Safety Management strategies for each sector in respect of these age groups are: —

Education:

Strategy 1: Teach young pedestrians basic road safety and instill sound habits at an early age

Strategy 2: Use the power of peer pressure

Publicity — Raising Awareness:
Strategy 3: Involve parents, high profile persons and business

Strategy 4: Make unsafe road user behaviour "uncool"

Community Liaison:
Strategy 5: Involve community in the safety of their children and their neighbour's children

Enforcement:
Strategy 6: Develop a programme for ongoing targeted enforcement in the vicinity of schools

Engineering:

Strategy 7: Focus on mitigation or elimination of hazlocs near schools

7.5.2.2 Pedestrians in the 20-30 Age Category in the Durban CBD

The Road Safety Management strategies for each sector in respect of this age group is the following: —

Pedestrians 20-30 yrs

Education and Public Awareness:
Strategy 8: Raise awareness among the public of pedestrian vulnerability

Strategy 9: Raise awareness among the public of pending enforcement

Enforcement:
Strategy 10: Develop a programme of targeted enforcement

Engineering:
Strategy 11: Consider an engineering solution if targeted enforcement fails

7.5.3 Strategic Thrust 3: Focussed Area-Wide Strategies

7.5.3.1 All Drivers, but Especially Male Drivers in the 20-30 Age Category

This Road Safety Management focus is municipal wide, but with a special focus on Phoenix where 35% of drivers in accidents are under the age of 30.

Thrust 3: Area-wide strategies

Public Awareness:
Strategy 1: Introduce low cost publicity options

Enforcement:
Strategy 2: Encourage drivers to respect speed limits

Strategy 3: Target drunk driving and seatbelts

7.5.3.2 Public Transport

In preparation for the 2010 Soccer World Cup, Public Transport has been included as a major focus area.

Publicity:
Strategy 4: Challenge the minibus taxi industry to do the right thing.

Strategy 5: Provide accreditation for conforming minibus taxi operators.

Enforcement:
Strategy 6: Target road worthiness, traffic operations and violations

7.6 Road Safety Calendar

Section 7.5 highlighted the various strategies that constitute the eThekwini Road Safety Plan. From these lists the following eThekwini Road Safety Calendar (2004-2009) has been compiled, highlighting the various campaigns and their key components as well as identifying the implementing agencies.

2004	CAMPAIGN	KEY COMPONENTS	RESPONSIBILITY
January			
February			
March			
April			
May			
June			
July			
August	Startup	Comment and finalize Road Safety Plan	All stakeholders
September			
October		Finalize Plan	eThekwini Transport Authority:
November	Arrive Alive — Holiday Campaign	eThekwini will support and endorse the campaign	DMPS
December	Arrive Alive — Holiday Campaign	eThekwini will support and endorse the campaign	DMPS

2005	CAMPAIGN	KEY COMPONENTS	RESPONSIBILITY
January	Arrive Alive — Holiday Campaign	eThekwini will support and endorse the campaign	DMPS
February	Establish all the Committees and sub-committees and begin to operationalise the strategies	Education strategy operationalised Enforcement strategy operationalised Engineering strategy operationalised Data systems operationalised	DMPS (RSEO) DMPS ETA: Road Safety Branch ETA and DMPS
March			
April	Arrive Alive — Easter Campaign	eThekwini will support the campaign	DMPS
May			
June			
July-December	Durban Road Safety Management Areas	Publicity • Posters on Light Poles • Flyers • Media Launch: High profile person to highlight issues and programmes Enforcement • Focussed operations to clear intersections, pedestrian crossings and illegal parking • Education	ETA: Road Safety Branch DMPS
August			
September			
October			
November	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
December	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS

2006	CAMPAIGN	KEY COMPONENTS	RESPONSIBILITY
January	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
February	Launch "Safe Routes to School"	Education • Child's Letter to Parents • "Walking School Bus" Enforcement • Line Patrols for 2 weeks Engineering • Safety audits and projects	DMPS (RSEO) DMPS ETA: Road Safety Branch
March			

April	Arrive Alive — Easter Campaign	eThekwini will support and endorse the campaign	DMPS
May			
June	Durban CBD Campaign	Publicity • Posters on Light Poles • Light and Water Bills • Community newspapers • Radio • Media Launch: High profile person to walk around in CBD Enforcement • Foot Patrols for first 2 weeks (education role) • Mounted patrols for 2 weeks (education role) • last 2 weeks motorcycle enforcement	ETA: Road Safety Branch DMPS
July-December	Durban Road Safety Management Areas	Publicity • Posters on Light Poles • Flyers • Media Launch: High profile person to highlight issues and programmes Enforcement • Focussed operations to clear intersections, pedestrian crossings and illegal parking • Education	ETA: Road Safety Branch DMPS
August	Learners Road Safety Poster Campaign	• Put up posters in community in the 4 road safety management areas • High profile person to visit school and hand out Prizes • Line patrols for 2 weeks	DMPS (RSEO) ETA: Road Safety Branch DMPS
September			
October	First Road Safety Indaba	• Annual meeting of Ethekwini Road Safety Council • Presentations on road safety activities • HERO awards dinner	ETA: Road Safety Branch
November	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
December	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS

2007	**CAMPAIGN**	**KEY COMPONENTS**	**RESPONSIBILITY**
January	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
February	Launch "Safe Routes to School"	Education • Child's Letter to Parents • "Walking School Bus" Enforcement • Line Patrols for 2 weeks Engineering • Safety audits and projects	DMPS (RSEO) DMPS ETA: Road Safety Branch
March			
April	Arrive Alive — Easter Campaign	eThekwini will support and endorse the campaign	DMPS
May			
June	Durban CBD Campaign	Publicity • Posters on Light Poles • Light and Water Bills • Community newspapers • Radio • Media Launch: High profile person to walk around in CBD Enforcement • Foot Patrols for first 2 weeks (education role)	ETA: Road Safety Branch DMPS

		• Mounted patrols for 2 weeks (education role) • last 2 weeks motorcycle enforcement	
July-December	Durban Road Safety Management Areas	Publicity • Posters on Light Poles • Flyers • Media Launch: High profile person to highlight issues and programmes Enforcement • Focussed operations to clear intersections, pedestrian crossings and illegal parking • Education	ETA: Road Safety Branch DMPS
August	Learners Road Safety Poster Campaign	• Put up posters in community in the 4 road safety management areas • High profile person to visit school and hand out Prizes • Line patrols for 2 weeks	DMPS (RSEO) ETA: Road Safety Branch DMPS
September			
October	Road Safety Indaba	• Annual meeting of Ethekwini Road Safety Council • Presentations on road safety activities • HERO awards dinner	ETA: Road Safety Branch
November	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
December	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS

2008	**CAMPAIGN**	**KEY COMPONENTS**	**RESPONSIBILITY**
January	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
February	Launch "Safe Routes to School"	Education • Child's Letter to Parents • "Walking School Bus" Enforcement • Line Patrols for 2 weeks Engineering • Safety audits and projects	DMPS (RSEO) DMPS ETA: Road Safety Branch
March			
April	Arrive Alive — Easter Campaign	eThekwini will support and endorse the campaign	DMPS
May			
June	Durban CBD Campaign	Publicity • Posters on Light Poles • Light and Water Bills • Community newspapers • Radio • Media Launch: High profile person to walk around in CBD Enforcement • Foot Patrols for first 2 weeks (education role) • Mounted patrols for 2 weeks (education role) • last 2 weeks motorcycle enforcement	ETA: Road Safety Branch DMPS
July-December	Durban Road Safety Management Areas	Publicity • Posters on Light Poles • Flyers • Media Launch: High profile person to highlight issues and programmes Enforcement • Focussed operations to clear intersections, pedestrian crossings and illegal parking • Education	ETA: Road Safety Branch DMPS

August	Learners Road Safety Poster Campaign	• Put up posters in community in the 4 road safety management areas • High profile person to visit school and hand out Prizes • Line patrols for 2 weeks	DMPS (RSEO) ETA: Road Safety Branch DMPS
September			
October	Road Safety Indaba	• Annual meeting of Ethekwini Road Safety Council • Presentations on road safety activities • HERO awards dinner	ETA: Road Safety Branch
November	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
December	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS

2009	**CAMPAIGN**	**KEY COMPONENTS**	**RESPONSIBILITY**
January	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
February	Launch "Safe Routes to School"	Education • Child's Letter to Parents • "Walking School Bus" Enforcement • Line Patrols for 2 weeks Engineering • Safety audits and projects	DMPS (RSEO) DMPS ETA: Road Safety Branch
March			
April	Arrive Alive — Easter Campaign	eThekwini will support and endorse the campaign	DMPS
May			
June	Durban CBD Campaign	Publicity • Posters on Light Poles • Light and Water Bills • Community newspapers • Radio • Media Launch: High profile person to walk around in CBD Enforcement • Foot Patrols for first 2 weeks (education role) • Mounted patrols for 2 weeks (education role) • last 2 weeks motorcycle enforcement	ETA: Road Safety Branch DMPS
July-December	Durban Road Safety Management Areas	Publicity • Posters on Light Poles • Flyers • Media Launch: High profile person to highlight issues and programmes Enforcement • Focussed operations to clear intersections, pedestrian crossings and illegal parking • Education	ETA: Road Safety Branch DMPS
August	Learners Road Safety Poster Campaign	• Put up posters in community in the 4 road safety management areas • High profile person to visit school and hand out Prizes • Line patrols for 2 weeks	DMPS (RSEO) ETA: Road Safety Branch DMPS
September			
October	Road Safety Indaba	• Annual meeting of Ethekwini Road Safety Council • Presentations on road safety activities • HERO awards dinner	ETA: Road Safety Branch
November	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS
December	Arrive Alive — Holiday Campaign	Extensive booze bus ops	DMPS

7.7 Evaluating Success

The Road Safety Plan recognises that success in road safety involves concerned with providing "safe" infrastructure as well as changing people's existing behaviour from "unsafe" into "safe" behaviour. Further the Plan recognises the fact that changing behaviour of large numbers of people does not happen quickly. It requires certain foundations to be laid and then built upon in order to achieve a gradually increasing and sustainable long-term impact. It is critical that this steadily unfolding and evolving process be monitored and evaluated.

One of the existing 'gaps' in current road safety activities that has been identified is the lack of evaluation. The eThekwini Road Safety Plan proposes to address this gap and the following objectives and measures have been identified to monitor and measure progress: —

Table 7.4 Monitoring Progress in Road Safety Programme

Objective	Base	Measure	2010 target Requirements	Evaluation Data it?	Who does
GENERAL					
Reduction Target					
• All Accidents	54209 (all) 547 fatal rate	• 10% reduction in the 3 year average	48788 (all) 492 (fatal) rate	• eThekwini accident database	ETA: Road Safety Branch
Reduction Target					
• Pedestrian accidents 5-19 age group in the Road Safety Management Areas:		• 10% reduction in the incidence and severity of pedestrian accidents by 2010		• eThekwini accident database	ETA: Road Safety Branch
– Umlazi	175		140		
– Chatsworth	81		65		
– Kwamashu	110		88		
– Phoenix	100		80		
– Umlazi	SI*		SI*		
– Chatsworth	SI*		SI*		
– Kwamashu	SI*		SI*		
– Phoenix	SI*		SI*		
– Umlazi					
– Chatsworth	rate		rate		
– Kwamashu	rate	10% reduction in	rate		
– Phoenix	rate	the pedestrian	rate		
	rate	accident rate (acc/pop)	rate		
Reduction Target					
• Pedestrian accidents in the Durban CBD	1526 (all ages) SI*	• 10% reduction in the incidence and severity of accidents by 2010	1373 (all ages) SI*	• eThekwini accident database	ETA: Road Safety Branch
Reduction Target					
• Minibus Taxi Accidents in the Road Safety Management Areas:		• 15% reduction in accidents by 2010		• eThekwini accident database	ETA: Road Safety Branch
– Umlazi	803		723		
– Chatsworth	545		491		
– Kwamashu	451		406		
– Phoenix	509		458		
– Durban CBD	2573		2316		
Reduction Target					
Driver behaviour: • seatbelt usage • speeding • alcohol	not yet available (to be determined)	not yet available	not yet available	not yet available	ETA: Road Safety Branch

*SI — *Severity Index = EAN/Total Number of accidents*
EAN — Equivalent Accident Number (Fatal=12, Serious=8, Slight=3, Damage=1)

Objective	Measure	Evaluation	Who does it?
ENGINEERING			
Eliminate hazlocs • Hazloc Programme	• 10 a year (budget dependent)	• hazloc prioritization procedure	ETA: Road Safety Branch
Eliminate hazlocs • Road Safety Audits	• 10 audits a year	• number of audits	ETA: Road Safety Branch
• Before and after studies	• At least 1 every year dependant on resource constraints	• before and after accident data and road infrastructure information	ETA: Road Safety Branch
EDUCATION			
Knowledge and Behavioural Changes	• Survey of behaviour (before-and-after), % change • Test of knowledge	Specialist must undertake evaluation	ETA: Road Safety Branch to appoint specialist consultant
Teach road safety to all children	• No. of children exposed to road safety material • Duration	• Schools data base	DMPS
Scholar patrols at all schools where needed	• 10 additional schools per year	• Schools database (reconcile with provincial database)	DMPS

Objective	Measure	Evaluation	Who does it?
ENFORCEMENT			
Drivers respect speed limits • speed timing	• 1000 man hours per month	• location • date, time, duration • offence rates • number of hours	DMPS to collect the data and pass on to the ETA: Road Safety Branch on a monthly basis
Minimum hours of enforcement	• 60% of DMPS non-dedicated time to traffic enforcement	• time control sheets	DMPS to provide ETA: Road Safety Branch with monthly summaries
No driving over the legal blood alcohol limit • Deploy Booze Buses • Breathalyzer testing	• 2 road blocks per week (must include pay weekend)	• location • date, time, duration • offence rates • number of hours • number of drivers tested	DMPS to collect the data and pass on to the ETA: Road Safety Branch on a monthly basis
Seatbelts and vehicle fitness • check for seat belt compliance and vehicle fitness	• 2 road blocks per week	• location • date, time, duration • offence rates	DMPS to collect the data and pass on to the ETA: Road Safety Branch on a monthly basis
EMERGENCY SERVICES			
Improvement of Response Times • Collect Response Time data	• Response times	• Date and time • Incident • How service provider is notified and by whom • Response time from time of first incoming notification to time the responding unit becomes available for a subsequent incident	The following organizations to collect and submit response time data to ETA Road Safety Branch twice a year: • AEMS (prov) • Fire (transport category) • DMPS • SAPS • SAPS Accident Unit • RTI • Netcare 911? • ER 24?

EXPOSURE			
Raise awareness of road safety			
• Road safety awareness campaigns	• Measure behaviour changes in representative sample of target group size (before-and-after)	• campaign details • target group	ETA: Road Safety Branch (appoint specialist)
EVALUATION			
Review Road Safety Plan	• Review after 3 years (Measure in terms of indicators detailed in this table)	• Data sources as detailed in this table	ETA: Road Safety Branch (appoint independent evaluator)

7.8 Institutional Arrangements

Some of the deficiencies highlighted by the status quo investigations were the complicated and often confusing structures and unclear lines of authority, lack of dedicated institutional arrangements as well as complex co-ordination channels.

This has often resulted in a lack of focus on road safety, a lack of accountability and co-ordination. The eThekwini Road Safety Plan addresses this situation by putting in place simpler institutional arrangements.

7.8.1 Overall Management Structure

Institutional arrangements

There are five council/committee structures in the proposed new institutional arrangement. These are: —

1. The eThekwini Road Safety Council (ERSC)
2. The eThekwini Road Safety Technical Committee
3. The Road Safety Enforcement Working Group — Joint Co-ordination Committee
4. The Road Safety Education Working Group
5. The Road Safety Engineering Working Group

7.8.2 Terms of Reference

The following sets out the terms of reference of the above council and committee structures.

The eThekwini Road Safety Council (ERSC)

It is envisaged that in the longer term an ERSC will be established.

ERSC Terms of Reference

The ERSC will be the highest authority with regard to the eThekwini Road Safety Plan and its members will be high profile persons who can officially commit their organisations and resources to the implementation of the Plan.

Perhaps the most critical success factor is the need for high level commitment to and involvement with the Plan, supported by communication of the fact both internally within the various agencies and also publicly.

An annual or biannual ERSC meeting will serve to introduce the upcoming phase of the Plan to council members and to ensure that any requirements of the Plan pertinent to any of the organisations represented on the council are included in the annual business plans and commitments of those organisations.

eThekwini Road Safety Technical Committee

The eThekwini Road Safety Technical Committee is an existing body that carries out a management and coordination function for road safety activities in eThekwini.

Within this framework of the road safety plan, the function of the eThekwini Road Safety Technical Committee will be to: —

- Ensure coordination across all stakeholders
- Provide guidance to the sector working groups

The Road Safety Enforcement Working Group — Joint Coordination Committee (JCC)

Under the framework of the Municipal Road Safety Plan, the JCC will provide coordination, direction and management of road safety based traffic law enforcement across the whole Municipality.

In support of this function, the JCC will require DMPS Regional Commanders to form Joint Operational Committees (JOC) as needed (non permanent) involving, but not limited to: —

- SAPS
- RTI
- SANDF
- Others as needed

The JCC will ensure that all Regions and specific operations operate under detailed business plans with specific and measurable outcomes and apart from monthly meetings will meet quarterly with all public and private emergency service providers for purposes of: —

- Discussing issues relating to on scene protocols amongst all the emergency service providers and
- Addressing service provider coordination issues.

The Road Safety Education Working Group
This group will be the facilitator of clear communication channels between all the role players. They will discuss progress on initiatives related to the business plan and co-ordinate all activities. They will also be responsible for co-ordination on ground level and alignment with national and provincial campaign and initiatives.

The Road Safety Engineering Working Group
The terms of reference of this group will be to review the prioritised hazlocs and motivations obtained from the eThekwini Road Safety Branch and to determine which projects will be put forward for funding under the various programmes for the financial year.

7.9 Funding and Action Programme

The eThekwini Road Safety Branch as the responsible implementing agency will put together the appropriate business plans incorporating the sector plans from education and enforcement.

Table 7.5 describes some of the possible sources of funding for the 5-year Action Programme, that can and will be considered by the RSB when compiling the annual business plan.

Table 7.5 Possible Sources of Funding for Road Safety Plan

Funding Source	Information
Local Economic Development funding	Link to Community based labour, poverty relief and enhanced mobility
Extended Public Works Programme	Labour-intensive methods to upgrade rural and municipal roads, municipal pipelines, storm-water drains and paving, as well as fencing of roads, community water supply and sanitation, maintenance of government buildings, housing, schools and clinics, rail and port infrastructure, electrification infrastructure, etc
Urban Renewal Programme	7 year programme, INK is a development node i.e. Inanda, Ntuzuma, Kwamashu (some provision for road safety)
KZN-Dept of Transport	Already receive AA funding and carry out safety activities in eThekwini as part of the provincial wide safety programme
eThekwini Transport Authority (ETA)	Have set aside some budget for Road Safety Plan
Municipal Infrastructure Grant	Link to facilities for non-motorized transport e.g footbridges
National Arrive Alive	ETA applies direct to Arrive Alive for funding
Public-Private Partnerships	Financial support from business in return for advertising space/exposure e.g. Toyota

Possible funding source

It comprises six sectors these being: —

- Engineering
- Education and community liaison
- Enforcement
- Emergency services
- Campaigns
- General

Table 7.6 shows the five year action programme for the Road Safety Plan.

Table 7.6 Road Safety Action Programme Engineering Sector

ACTIVITIES	RESPONSIBILITY	WHEN	COST (R)	FUNDING SOURCE
A. GENERAL				
1. Annual business plans for funding: • eThekwini Municipality — Engineering projects/traffic calming • Asiphephe — hazloc program • Arrive Alive — Overtime and booze bus (enforcement	eThekwini Transport Authority: Road Safety Branch	Annually		n/a
2. Develop a comprehensive road safety information system which will include risk assessment, engineering, enforcement, education and accident data	eThekwini Transport Authority: Road Safety Branch	October to February 2005		ETA
3. Develop a hazchem plan for eThekwini	eThekwini Transport Authority: Road Safety Branch	February to April 2005	R120 000 Still to be confirmed	ETA
4. Organize an eThekwini Road Safety Indaba and HERO awards function to recognize persons who have made outstanding contributions to the community in the field of Road Safety. Invite all sectors. • Annual meeting of the eThekwini Road Safety Council	eThekwini Transport Authority: Road Safety Branch	Annual event October, first meeting in October 2006		
5. Include Road Safety in annual eThekwini Quality of Life survey	eThekwini Transport Authority: Road Safety Branch	Annual, Develop question in 2005 and target 2006		n/a
B. SECTOR: ENGINEERING				
a: BASICS				
6. Indicate funding and projects for coming year	eThekwini Transport Authority: Road Safety Branch	Annually		n/a
7. Capture Road Safety Projects for database	eThekwini Transport Authority: Road Safety Branch	ongoing		n/a
8. Develop a standardized • network screening procedure • prioritization procedure	eThekwini Transport Authority: Road Safety Branch	2005 (from 2006 onwards, engineering projects will go through the standardized procedure)	R60 000 To be confirmed	ETA
9. Carry out before-and-after studies on implementation projects.	eThekwini Transport Authority: Road Safety Branch	ongoing	project specific	ETA
10. All new plans to be audited	eThekwini Transport Authority: Road Safety Branch	ongoing	internal	n/a
b: AREA WIDE				
11. Carry out formal area-wide HAZLOC programme: • using standardized network screening procedure • using standardized prioritization procedure • list of projects for funding in a particular year • audits and assessments of priority hazlocs	eThekwini Transport Authority: Road Safety Branch Engineering Branch	Annual, BUSINESS PLAN (in time to put forward projects for funding from the various sources)		

c: ROAD SAFETY MANAGEMENT AREAS				
12. Carry out Road Safety Audits of Routes to School and propose remedial/mitigation measures as necessary • Focus first on schools in Road Safety Management Areas • Ultimately extend to all schools, area wide	eThekwini Transport Authority: Road Safety Branch Engineering Branch	Annual, ongoing		
13. Durban CBD: Monitor results of CBD campaign for 5 years, if results are not satisfactory, seek engineering solution	eThekwini Transport Authority: Road Safety Branch	towards end of 2009		
C. SECTOR: EDUCATION AND COMMUNITY LIAISON				
a: BASICS				
14. Create a pool of dedicated Road Safety Officers (15 RSEO)	Durban Metropolitan Police Service eThekwini Transport Authority: Road Safety Branch	February 2005		eThekwini Minicipality
15. Business Plan	Durban Metropolitan Police Service (RSEOs)	Annually in time for submission to national and province		n/a
16. RSEOs co-ordinate activities with KZN provincial "CRSCs"	Durban Metropolitan Police Service (RSEOs)	Annually and at monthly meetings		n/a
17. Determine which organizations require KZN-DoT educational material e.g. Adult pedestrian flip charts • Ensure that the necessary materials reach the trainers	Durban Metropolitan Police Service (RSEOs)	annually in time to get material to users		n/a
18. Deploy scholar patrols at all schools where they are needed: • RSO check provincial database • Focus on road safety management areas first • Eventually extend to all schools area wide	Durban Metropolitan Police Service eThekwini Transport Authority: Road Safety Branch Engineering Branch	Ongoing	to be determined	KZN — DoT
19. Create and maintain an eThekwini schools database: • Road Safety champion at each school • if there are scholar patrols at the schools • has scholar patrol training been done • road safety audits carried out, when, results, actions • which education officer visited school • which schools have been visited • date and duration of visit • type of road safety education • no. of learners reached by education programme • material they were exposed to	Durban Metropolitan Police Service (RSEOs) eThekwini Transport Authority: Road Safety Branch	ongoing		n/a
20.Skills audit of Road Safety Officers • provide training to get them all to the same level	Durban Metropolitan Police Service (RSEOs)	Jan 2005.	To be determined	

b: AREA WIDE				
21. Establish Community Based Road Safety Workgroups • Organize workshops to train parents, unemployed graduates, youth, older school children and any concerned citizens to carry on the road safety work at schools, churches and community centres * Which trainers were trained? * Name/location of Community forum? * Material/type of training	Durban Metropolitan Police Service (RSEOs)	During 2005 in focus areas Expand to all areas during subsequent years		
22. Trainers keep records and report back to RSEO and information is entered into database: • Number of community members reached • Name of community • Type of activity • Venue, date and duration	Durban Metropolitan Police Service	During 2005 in focus areas Expand to all areas during subsequent years		n/a
23. Nominate a Road Safety Champion in each school. The RSEO will check who the road safety champion in each school is at the start of each year	Durban Metropolitan Police Service (RSEOs)	Annually		n/a
24. Determine which schools have the KZN-DoT education material, "child-in-traffic", STEP, available and which don't. • Ensure that the necessary materials reach the educators in each school	Durban Metropolitan Police Service (RSEOs)	In March annually, Ongoing		
25. Investigate Public-Private partnership funding for: • poster campaigns • Annual Schools July Road Safety poster competition prizes • Junior Traffic Training Centres • Community radio campaign	eThekwini Transport Authority: Road Safety Branch	Ongoing		n/a
D. SECTOR: ENFORCEMENT				
a: BASICS				
26. Business Plan • Indicate funding for coming year (include Arrive Alive Funding for equipment and overtime)	Durban Metropolitan Police Service	Annually		n/a
27. Offence rates to be sent to ETA: RSB	Durban Metropolitan Police Service	Monthly		n/a
28. Investigate cost to get booze buses up and running:	Durban Metropolitan Police Service	November 2004	R2.0m est.	To be determined
29. Create a dedicated Road Safety Task Force (11 members): • either 11 new officers or 11 assigned from general force • Road Safety Task Force Officers must preferable hold a Traffic Officers Diploma • 5 dedicated branded vehicles	Durban Metropolitan Police Service	2005 5 members and 3 vehicles 2006 6 members and 3 vehicles	Operating Cost R680 000 Capital Cost R550 000 Operating Cost R820 000 Capital Cost R550 000	eThekwini Municipality
30. Provide information regarding the hours spent of traffic enforcement by the general force to ETA: RSB	Durban Metropolitan Police Service	Monthly		n/a

31. Electronic enforcement tender • Road Safety Plan Objectives Included • equipment able to collect general traffic data	eThekwini Transport Authority	August 2004	
32. Outstanding Fines: Take up the issue with the NDoT regarding the judicial process. • Reciprocal arrangement between municipalities for the serving of summons.	eThekwini Transport Authority: Road Safety Branch	July 2005	n/a
33. Investigate the legal implications regarding not re-issuing of rank permits if there are outstanding fines and not renewing Operating licenses (renewable every five years) will not be renewed if there are outstanding fines • Set up a database to check the fine status of all buses, taxis, metered taxis	Durban Metropolitan Police Service: Public Transport Unit	2005	n/a
34. Challenge to the Taxi Industry to become accredited for 2010. Develop 5 year accreditation procedure:	Durban Metropolitan Police Service: Public Transport Unit eThekwini Transport Authority: Road Safety Branch	2005	n/a
35. Investigate the allegations of corruption in call centres: • DMPS • SAPS • AEMS	Relevant Institution	Ongoing	n/a
b: AREA WIDE			
36. Provide list of Hazlocs for targeted enforcement Road Safety Branch	eThekwini Transport Authority:	Monthly	n/a
37. Identify enforcement locations ETA :RSB to identify • line patrols • speed timing • booze bus ops	Durban Metropolitan Police Service eThekwini Transport Authority: Road Safety Branch	Monthly	n/a
38. Evaluation and Revision of Enforcement Strategy	Durban Metropolitan Police Service	Monthly	n/a
39. Deployment of Booze Buses • Enforce drink driving, seatbelts, roadworthy	Durban Metropolitan Police Service	Every 2 weeks	NdoT, eThekwini Municipality
40. Ongoing Enforcement: Speed Timing Unit • RSB send locations to DMPS • DMPS send violation info to RSB	Durban Metropolitan Police Service: Speed Timing Unit eThekwini Transport Authority: Road Safety Branch	Ongoing	n/a
41. Taxi Industry Accreditation: • Self imposed survey • Passenger survey	Durban Metropolitan Police Service: Public Transport Unit to facilitate eThekwini Transport Authority: Road Safety Branch	Monthly	n/a
c: ROAD SAFETY MANAGEMENT AREAS			
42. Carry out line patrols along the "routes to school" in the 4 road safety management areas	Durban Metropolitan Police Service	Ongoing	n/a

43. Targeted CBD enforcement, motorcycle police: • parking/stopping in intersections and pedestrian crossings • parking violations PUBLIC TRANSPORT • boarding/alighting points of Public Transport Vehicles • keeping intersections and pedestrian crossings clear • impounding unroadworthy vehicles	Durban Metropolitan Police Service	Ongoing		n/a
44. Durban CBD Campaign: Enforcement officers to patrol on horseback and on foot to warn and educate people about jaywalking.	Durban Metropolitan Police Service	Annually in June, week long campaign	To be determined	
E. SECTOR: EMERGENCY SERVICES				
a: BASICS				
45. Provision of a free emergency services number for eThekwini	eThekwini Transport Authority: Road Safety Branch to participate	2006		
46. Meeting with all emergency service providers to obtain voluntary co-operation, co-ordination undertakings: • Department of Health • eThekwini Fire • DMPS • SAPS • SAPS Accident Unit • AEMS • Netcare 911 • AA • ER24	eThekwini Transport Authority: Road Safety Branch	March 2005		n/a
47. Investigate the conditions of the licence to private emergency service providers. Need them to provide response time data.	eThekwini Transport Authority: Road Safety Branch	Aug 2005		n/a
48. Set up a response time database for all service providers and evaluate AEMS sample of response times	eThekwini Transport Authority: Road Safety Branch	sample	R10000	ETA
49. Investigate the contracting of private ambulance service providers e.g. Netcare by the Department of Health to supplement the provincial ambulance provision in eThekwini.	eThekwini Transport Authority: Road Safety Branch to facilitate	October 2005		n/a
50.Tracking systems to be installed on all emergency service vehicles, location and engaged/free capability (not crime tracker)	eThekwini Transport Authority: Road Safety Branch to facilitate	2006		
F. SECTOR: CAMPAIGNS				
51. Launch of the eThekwini Road Safety Plan • Arrange function, high profile person (mayor) to introduce the plan • statements to the press • message on lights and water bills • article in free metro newspaper • Pledge to public of exemplary driving behaviour by municipal employees (6.5.2)	eThekwini Transport Authority: Road Safety Branch Durban Metropolitan Police Service	Once plans operationalised		ETA

52. Holiday Arrive Alive • Align eThekwini activities with national programme	eThekwini Transport Authority: Road Safety Branch Durban Metropolitan Police Service	Christmas period		n/a
53. "Launch Safe Routes to School" in Road Safety Management Areas • Letter to parents in child's writing (7.1.2) • "Walking School Bus" with high profile person to "drive" the bus in each of the 4 road safety management areas (7.1.2)	Durban Metropolitan Police Service (RSEO)	February 2006		
54. Arrive Alive Easter Campaign	eThekwini Transport Authority: Road Safety Branch Durban Metropolitan Police Service	April each year		
55. Learners Road Safety Poster Campaign (7.1.1) • School has own name for their own campaign (7.1.1) — to be confirmed	eThekwini Transport Authority: Road Safety Branch	Annually in July at start of 3rd school term	To be d etermined	
56. Durban CBD Campaign(7.2.1): Media exposure, radio, metro newspaper • Inform the general public about the pending campaign, two weeks notice • Inform the public and transport operators what enforcement will be carried out in a fortnight's time.	eThekwini Transport Authority: Road Safety Branch	Annually in June	To be determined	ETA
57. Durban CBD Campaign (7.2.1): Poster Campaign on light poles "Look before you walk!" Also use picture based message to cater for illiteracy	eThekwini Transport Authority: Road Safety Branch Durban Metropolitan Police Services (RSO-Edu)	Annually in June		
58. Durban CBD campaign: Durban CBD enforcement/education campaign, enforcement officers patrolling on foot and talking to the public.	Durban Metropolitan Police Service RSEOs Enforcement Officers	Annually in June		
59. Durban CBD Campaign: High profile person to walk around in Durban CBD at launch of the CBD campaign and raise awareness regarding jaywalking	eThekwini Transport Authority: Road Safety Branch	Annually in June		

8 FREIGHT

8.1 Introduction

The eThekwini Transport Authority has started a process that will eventually lead to a comprehensive Freight Plan for the Municipality. Documentation in this section of the ITP covers: —

Current phases of freight plan

• **Phase 1:** The Status Quo on the Freight Transport System with the primary focus on existing demand, capacity utilisation and operating issues.

• **Phase 2:** The Compilation of Views of Users and Service Providers regarding perceived problems with the Freight Transport System

• **Phase 3:** Known Future Developments Expected to Effect Freight Travel Patterns.

Phases 1 to 3 give: —

• A basic understanding of the existing inadequacies of the freight system

• Insight into perceived problems from the perspective of operators, users and service providers

• Insight into possible freight impacts of proposed new developments within the Municipality

8.2 Freight Transport System

The movement of freight to/from and within eThekwini Municipality is carried out by a multi-modal transport system of shipping, air transport, road and rail transport and pipelines.

8.2.1 The Port of Durban

Port of Durban

The Port, comprising 63 berths, handles some 60 million tons of freight annually which makes it the second busiest port (in terms of tonnage) in the southern hemisphere after Richards Bay. Berth configurations at the six working areas in the harbour complex vary considerably with the newer areas generally having deeper water and longer berths. In addition there is a single offshore site.

~~The Port has a major influence on the level and types of freight movement in eThekwini~~ Municipality.

The harbour is accessible by both rail and road. Road access is via the Central Business District which is located immediately adjacent to the Port. Historically rail has transported the greater share of the freight demand, however, this has changed significantly over the last decade, with road freight now transporting a significant proportion of freight to and from the Port. This has occurred for two main reasons: —

• The decrease in the reliability, availability and total delivery time of rail services.

• The increase in the availability and reliability of road based services, and the improvement in road travel and costs.

8.2.2 The Road System

Road System

The eThekwini municipal area road system (see also Section 6) is a comprehensive network comprising municipal, provincial and national roads. Currently, any of these roads can be used for freight movement unless there are load limitations or vertical clearance constraints for abnormal loads.

Within the road system there are capacity limitations, which impact on road freight movements particularly in peak periods; not an uncommon situation in port cities. In particular, limited access capacity to/from the Port impacts on freight movement as well as contributing to congestion and environmental degradation in the CBD.

8.2.3 The Rail Network

The rail freight network comprises a well developed local system and main lines to and from the city. The local system connecting the Point to the southern industrial areas, between the Port and the Airport, was designed to carry import and export cargo. Branch lines into the interior of the province were intended to open this interior and give support to the timber and agriculture industries. Main lines to and from eThekwini include: —

Rail lines

• The Durban — Gauteng line which has been a critical element in the successful development of the economy in the interior of the country, and continues to serve the SADC region as the primary link to the Indian Ocean.

• The Durban — Golela (Swaziland) line which, apart from carrying minerals cargo in transit by Swaziland Railways from the Phalaborwa areas to Richards bay for export, has somewhat limited use. The major users being timber on branch lines from Mpumalanga, sugar cane on branch lines, some bulk sugar on main lines and coal to large industrial consumers.

• The Durban — Port Shepstone line which serves the sugar, lime and timber industries.

8.2.4 Pipelines

Petronet pipelines

Pipelines are a major transporter of liquids to/from and within eThekwini Municipality. Three of the four major national pipelines converge on Durban. The three pipelines which are owned and operated by the Petronet division of Transnet are: —

• The Refined Products Pipeline from Durban to Sasolburg

• The Crude line, that conveys crude oil from Durban's offshore mooring buoy to the Reef storage and inland refinery

• The Gas line from Secunda, via Richards Bay to Durban

8.2.5 Durban Airport

The existing airport is situated 16km south of the Durban CBD, and there are currently plans being assessed to relocate the facility to the proposed Dube Trade Port to the north of Durban. From a freight perspective, the current airport is constrained by its short runway (2,4km), which cannot be used by fully loaded long-haul freight aircraft.

Historically export air cargo from Durban has been flown domestically to Johannesburg International Airport for transhipment to international flights for export. The cargo is normally transported in the hold of passenger flights. SAA also have dedicated freighter aircraft that carry a total of 1 230 tons of freight, express cargo and mail per annum.

Air cargo

Additionally, SAA and other airlines operating from Durban have overnight road based cargo services to Johannesburg. The limited quantity of cargo passing through Durban Airport does not warrant additional dedicated air cargo services.

There is no rail link to the airport, requiring all cargo to be transported to and from the airport by road.

8.3 Freight Demand and Use of the Supply System

8.3.1 Road Freight

Information in this section is drawn from The Freight Transport Databank for KwaZulu-Natal. Counts of heavy commercial freight vehicles were expanded to reflect annual truck movements across the eThekwini Municipal boundary. These are shown in Table 8.1.

Table 8.1 Annual Truck Volumes to and From eThekwini Municipal Area

Screenline Location	Truck Movements (2 Way)	
West	1 979 000	(66%)
North	931 000	(31%)
South	91 000	(3%)
	3 001 000	(100%)

Truck Volumes

By far the major movement is along the Durban — Gauteng corridor (66% of the total) with significant truck traffic (33%) on the Durban — Richards Bay corridor and a small volume (3%) on the Durban — Port Shepstone corridor.

In addition some 9,0m LDV's crossed these screenlines but no data is available for the freight tonnage which these vehicles may have carried. The tonnage of freight carried by the 2,9 million truck trips is shown in Table 8.2.

Table 8.2 Annual Truck Freight Tonnage to and from eThekwini Municipal Area

Screenline Location	Truck Freight Tonnage 1000's — 2 Way	
West	32 738	(71%)
North	12 338	(27%)
South	860	(2%)
	45 936	(100%)

Road freight tonnage

There is more or less an even split between inbound and outbound tonnage at each of these screenlines.

8.3.2 Rail Freight

Research shows that there has been a continuing decrease in general cargo carried by rail throughout South Africa since the early 1980's.

Annual tonnages carried by rail to/from eThekwini (Year 2001/2002) on the various rail links are as follows: —

Table 8.3 Annual Freight Tonnage by Rail to/from eThekwini Municipality (Year 2001/2002)

Rail Line	Direction	Annual Tonnage (1000's)
Durban — Gauteng Main Line	towards PMB	4 486
	towards DBN	10 824
	both directions	15 310 (75%)
Durban — Richards Bay	both directions	2 710 (13%)
Durban — Golela	both directions	1 177 (6%)
Durban — Port Shepstone	both directions	1 280 (6%)
All Lines	**both directions**	**20 477 (100%)**

Rail freight tonnage

A comparison of road and rail tonnage in Tables 8.2 and 8.3 shows that more than twice the rail tonnage is carried by road hauliers to and from eThekwini and the pattern is consistent irregardless of whether the services are towards the west, north or south.

8.3.3 Freight through Port of Durban

The total freight tonnage processed through the Port in 2002/2003 is estimated at 58 million tons up from an estimated 54.1 million tons in 2001.

Table 8.4 Annual Freight Tonnage by Sea to/from Port of Durban

Sea Trade Category	Tonnage (millions)
Petroleum products	26,397 (45%)
Containerised cargo	15,546 (27%)
Bulk cargo	8,703 (15%)
Breakbulk cargo	7,622 (13%)
Total	**58,268 (100%)**

Port cargo

Source: Freight Transport Data Bank — KwaZulu Natal

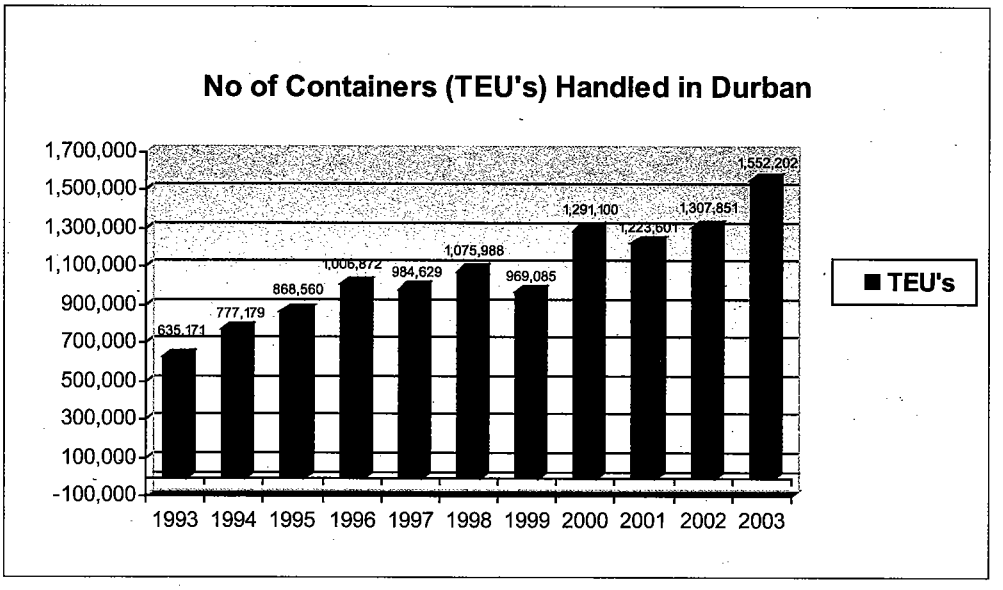
It is significant that the high volume petroleum category constitutes 45% of total tonnage through the Port. This commodity makes minimal demands on land side transport infrastructure, as most movements from discharge to the refineries and onwards, are effected by pipeline.

Containerised cargo dominates the high-value end of the cargo spectrum, and is the fastest growing component of the port's traffic (see following graph). To an increasing extent it is distributed by road rather than rail.

Declining conventional cargo

Break-bulk or conventional cargo represents a shrinking market in Durban's freight base as the container market increases, and as some break-bulk and conventional cargoes are now exported via Richards Bay.

Container growth



Source: National Port Authority

The 1,6 million TEU's ("Twenty foot equivalent units") handled in Durban in 2003 (up 18,6% from 2002) represents 1,1 million actual container moves due to the fact that increasingly 40 foot containers are being used instead of the 20 foot boxes.

As container volumes have grown, so has the proportion of containers moved by road rather than by rail. Research into port-related economic activity in 1994/1995 shows that, non-transshipment box moves (that is, the sum of national and over border traffic) were shared roughly equally by rail and road transport. By 2003, 76% of non-transshipment container traffic, on a TEU basis, was delivered or distributed by road, and only 24% by rail. Approximately 35% of non-transshipment container traffic can broadly be described as Durban based cargo (associated with cargo sources and sinks in the Greater Durban Metropolitan Area), and almost all of this is road hauled. The Durban Container Terminal (DCT) reports approximately 2 069 truck moves per day (ie. in and out of the Port) in 2003. This high volume of heavy vehicles leads to chronic road congestion in the immediate environs of the DCT, plus heavy traffic volumes in the Bayhead area.

8.3.4 Broad Road/Rail Split of Durban Port Traffic

Increasing use of road over rail

No detailed data on a split of Durban harbour imports and exports between road haulage and rail transport is available. It is generally concurred that road freight is responsible for the majority of port related cargo movements, and that road's share has been rising significantly.

Where data is available, it indicates that over three quarters of container cargoes and a similar proportion of citrus exports is road hauled. A significant proportion of conventional break-bulk cargoes, notably bagged cargoes, is also conveyed by road. A lower proportion of bulk cargo is transported by road.

This trend is indicative of the poor rail service levels when compared to road-based services. A more detailed analysis of the road/rail freight split to and from the Port is clearly required. The issues that need to be addressed are: —

- The user costs of the modes
- The reliability of the modes
- The availability of the services
- The delivery times associated with the use of each of the modes

8.3.5 Use of Pipeline Network

As mentioned above, there are three pipelines owned and operated by Petroport that serve the Durban area. These transport refined, crude oil and gas to different destinations as follows: —

- Refined products — Durban to Sasolburg
- Crude Oil — Single-Buoy-Mooring to Durban
- Gas Products — Durban to Secunda via Richards Bay

The pipelines currently move approximately 2,3 million tons of refined products and 4,6 million tons of crude oil per annum. The refined products line has potential for expansion up until about the year 2007 whereas the crude oil line is already running at near capacity.

Pipeline tonnage

8.3.6 Durban Airport Freight Movement

Airfreight cargo handled at Durban Airport is mainly destined for Johannesburg Airport, with smaller quantities going to Cape Town, Port Elizabeth and East London. All cargo transported by road is destined for Johannesburg Airport.

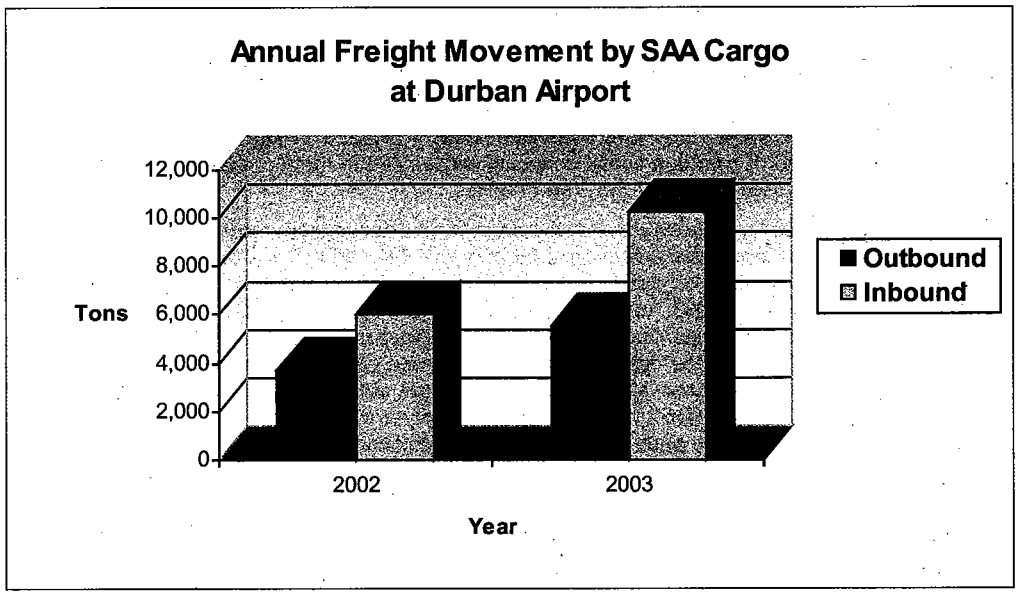
SAA Cargo also provides a road freight service between Durban and Johannesburg Airports, handling larger cargo items not transported by airfreight. During 2003 an estimated 283 heavy vehicle trips were made transporting approximately 9 400 tons of cargo.

Airfreight operators located at Durban Airport are: —

- SAA Cargo
- Swiss Port
- Cargo Service Centre
- Express Air Services

Limited information is currently available on these operations apart from SAA Cargo Services; however, The Airport Company South Africa (ACSA) is in the process of preparing a report on airfreight movements based on data gathered from all the operators.

The following graph shows the total inbound and outbound freight movement by SAA Cargo through Durban Airport. Unfortunately no information is available for the other freight operators at the airport.



SAA airfreight

Airfreight cargo handled at Durban Airport is mainly destined for Johannesburg Airport, with smaller quantities going to Cape Town, Port Elizabeth and East London.

SAA Cargo also provides a road freight service between Durban and Johannesburg Airports, handling larger cargo items not transport by air. During 2003 an estimated 283 heavy vehicle trips were made transporting approximately 9 400 tons of cargo.

8.4 Future Generators of Freight

Table 8.5 summarises the projected freight generating activities of upgraded, expanded and new projects planned for the eThekwini municipal area in the foreseeable future.

Future freight generating projects

In total, some 44 projects were identified in discussions with relevant authorities and developers. The current status of these projects is as follows: —

- Approximately 30% have been planned
- Approximately 40% are under discussion
- Approximately 30% are under investigation

Of the total some 10% are committed.

The anticipated start and completion dates are the following: —

- Approximately 70% of the developments are planned to start before 2010, with 30% planned to start after 2010

• Approximately 50% are planned to be completed and operational by 2010, while 50% are planned to be completed and operational after 2010

Table 8.5 Freight Generation Activity of Proposed Future Freight Generators

Development Category	No of Projects	Estimated GLA (m2)	Estimated Annual Freight Trips	Freight Tonnage (millions)
Infrastructure	7	—	—	—
Heavy Industry	4	300 000	578 000	13,3
Light Industry	12	680 000	1 502 000	30,6
Agriculture (Poultry)	1	5 000	12 000	0,3
Recreational (Soccer Stadium)	1	—	—	—
Retail	15	645 000	1 158 000	26,4
Tradeport	1	250 000	452 000	10,8
Landfill Sites	3	160 000	—	—

From the projects identified, retail and light industrial dominate in terms of numbers of projects, land take-up and freight movement activities. Although details are not available for all development categories, from the figures available, the total estimated freight traffic generated by the retail and light industrial categories accounts for over 70% of the total. Similarly, these categories account for 70% of the annual freight tonnage of some 84 million tons associated with the anticipated future developments.

Locationally, a significant proportion of the developments (approximately 40%) lie within a 15km radius of the Durban CBD, while over 60% lie within a 30km radius of the Durban CBD.

The majority are located adjacent or very close to the N3 or N2 corridors. The transportation reason for this is the accessibility and mobility offered by these corridors to the developments. Other reasons include the service infrastructure that is available in these areas ie. water, electricity, etc.

Development clusters are also noticeable around activity nodes such as Inanda, Umbogentwini and the industrial areas south of Durban Airport such as Prospecton, Jacobs and Mobeni.

8.5 Problems and Issues

As part of the development of the freight plan for eThekwini questionnaires were circulated and interviews conducted with a range of industry stakeholders representing: —

• Infrastructure suppliers

• Infrastructure users

• Enforcement agencies

A wide variety of problems were identified as documented below. Of note is the fact that many of these are symptomatic of fundamental underlying problems that relate to the planning of the Port and its environs and issues around road and rail freight transport that have resulted in an artificial imbalance in the use of these two systems.

8.5.1 Road/Rail Freight Modal Mix

As a port city eThekwini is a major generator/attractor of freight to and from the hinterland. Some of the problems related to the operations of the port and the negative impacts on the surrounding urban development emerge from the imbalance between the appropriate use of road and rail freight service options.

Limited use of rail

As stated in the Provincial White Paper on Freight Transport Policy 2004, the main line from Durban and Gauteng operates at 35% of the line capacity and could handle a far higher portion of long distance freight, if equipment and systems were upgraded. Similarly the line between Durban through Golela to Swaziland has spare capacity. Branch lines throughout the province "including the Durban — Port Shepstone line are under-utilised but in need of urgent rehabilitation...".

Poor rail performance

The Moving South Africa (MSA) report on "A Transport Strategy for 2020" noted that the rail freight category 'general freight' performed poorly on service reliability and operating costs. When measured against international benchmarks and Spoornet reliability targets, rail only achieved a 68% reliability level for general freight.

Dominant use of road

Whilst rail carries more than 40% of bulk commodities in the busy Durban/Gauteng corridor, general freight haulage by rail is much lower and on all other corridors where rail and road provide a parallel competitive service, road on average transports 80% of all the cargo. Further, road freight is the dominant means of transport for local and short haul demand.

In the MSA document it was reported that in international experience rail costs should generally average less than 70% of road freight costs. The document further noted that "while customers expressed satisfaction in general with road freight prices and levels of service, they were significantly less satisfied with rail general freight prices and service, and were highly dissatisfied with current levels of service, especially delays, at the ports."

Given the relatively poor levels of rail service, reliability and higher costs for general freight in particular, it is not surprising that road freight is the dominant carrier to and from the Port of Durban.

Addressing these problems is predominantly a national and to a lesser degree provincial imperative. Current national and provincial freight policy suggests that in the future many of the problems giving rise to these imbalances will be addressed. It is therefore reasonable to expect that this will result in an increasing utilisation of rail which will reduce some of the negative impacts of transporting freight in and through eThekwini Municipality.

Future use of rail

8.5.2 The Port of Durban

8.5.2.1 Planning

Both the Port Authority and Municipal officials have expressed concern that strategic planning by the other party is largely carried out in isolation, with limited opportunity to influence the other's strategic planning proposals.

Port planning

Growth planning strategies for the Port have far reaching impacts on the Municipal road system and road users as well as the ability to maintain a reasonable standard of access to the Port.

Whilst national and provincial policy recognise the need for integrated and coordinated planning at all levels of government, the interpretation of this in practical terms needs to be pursued further.

8.5.2.2 Port Access

Container Terminal access via Langeberg and Bayhead Roads was identified as the most serious current problem by the various stakeholder groups with serious capacity limitations resulting in: —

- Long queues and delays into and within the container terminal
- Substantial downtime
- Additional running costs and overtime
- Delayed deliveries
- Loss in operator revenue
- Trucks accessing the SA Container Depot (SACD) and Mediterranean Shipping Company (MSC) off Langeberg Road were also delayed in the main queue to the container terminal
- Pedestrian and heavy vehicle accidents attributable to bad driving behaviour in part due to driver frustrations and lack of visible law enforcement
- Possible closure of access in the event of a serious accident on Bayhead Road

Container terminal access

Durban Harbour access was also raised as a problem of lesser severity. The associated problems were defined as: —

- No alternative route to the southern areas of the Port
- Congestion at the intersection of Bluff and South Coast Roads
- High volume of trucks carrying containers and illegal parking of these vehicles particularly along South Coast Road contribute to severe congestion in the greater port area, including the CBD
- Poor road infrastructure maintenance in vicinity of rail crossings as well as faulty traffic signals

Durban harbour access

8.5.3 Airport Access

Access to the Swiss Air Cargo depot on the south side of the airport is problematic due to there being a single point of access to the airport. Consequently, heavy vehicles operate in mixed traffic with light vehicles when accessing this cargo depot.

8.5.4 Road Congestion

Heavy vehicles, most of them container carrying trucks contribute significantly to congestion on the road system to/from the Port including the CBD road system.

Road congestion

The rapid growth in container freight through the Port has been accompanied by a major shift in land side transport from rail to road, to the extent that in 2003, 76% of non-transhipment container traffic was delivered or distributed by road (Section 8.3.3). This phenomena together with the growth in container traffic has contributed greatly to congestion related issues in and around the Port, the CBD and on sections of the metropolitan road system.

8.5.5 Road Safety

Road safety

It has been estimated that on average 18% of all vehicle accidents in the eThekwini municipal area involve heavy vehicles. A number of factors contribute to this poor road safety record for the heavy vehicles: —

- Congestion and associated driver frustration accompanied by lack of visible law enforcement contributes to irresponsible driver behaviour particularly on the congested section of the access road to the container terminal
- Excess speed and reckless driving are responsible for accidents on dangerous sections of the metropolitan road network
- Toll avoidance contributes to unsafe operation and congestion on alternative, less suitable, routes
- The common practice of overloading increases the risk of accidents
- Defective equipment in the primary safety systems of vehicles including brakes, steering, tyres, lights and other defects

8.5.6 Overloading

Overloading

Overloading is a major issue not only contributing to accidents involving heavy vehicles but to the deterioration of road pavement structures. The net effect is an unnecessarily high cost of road maintenance, a cost which is currently treated as an externality cost and not built in to the cost of road freight transport.

A lack of conveniently located weigh bridge facilities and lack of manpower to enforce loading regulations was identified as a contributing factor.

8.5.7 Hazchem Routes

Hazchem Routes

The lack of defined hazchem and dangerous goods routes in the Municipal area is a serious shortcoming of the current road freight system, which will be addressed as a part of the freight plan.

8.5.8 Pollution

Pollution

Road transport is recognised as a major contributor to air pollution in large cities. Heavy vehicles are a component part of the problem and in addition are a significant contributor to noise pollution.

8.5.9 Law Enforcement

Law enforcement

The level of resources affects the extent of policing possible and the visibility of law enforcement on the road system.

Lack of visible traffic law enforcement was identified as a contributing factor to illegal and dangerous driving and parking on the main access road to the Durban Harbour container depot.

Lack of manpower resources and weigh bridge facilities were also seen as contributing factors to the extent of overloading violations.

The movement of abnormal loads is managed by Durban Metro Police and the Provincial Road Traffic Inspectorate. The lack of manpower and unwillingness to pay overtime means that abnormal loads often need to be moved during the day including peak periods, when there is a much higher level of conflict with other vehicles.

8.5.10 Emergency Services

Emergency services

The emergency services have limited resources, particularly at night to deal with road accident emergencies, especially those required to deal with hazardous goods spills.

8.6 Freight Plan Projects

An initial response to some of the key problems and issues includes a number of planning projects as well as infrastructure projects that form part of the Implementation Plan — Section 13 of the ITP.

Planning projects include the development of a road based: —

- Hazchem route network
- Freight route network
- Abnormal load network
- Investigation of Truck Stop

Freight plan projects

Capital infrastructure roads projects that form a part of the five year ITP programme in Section 6 — Roads, include: —

- The Edwin Swales Drive (M7) upgrade from the N2 freeway to Titren Road (see also Section 6.5.2 — Project 19)

• Bayhead Road Extension over the Southern Freeway including the new Kongela Bridge and access to Edwin Swales Drive via Sydney and Umbilo Roads (See also Section 6.5.2 — Project 20)

• Implementation of hazchem routes (planned above)

In addition, the five year ITP programme will include upgraded freight management infrastructure to the extent of R5,0 million. The exact nature of the infrastructure will be defined in the next phases of the Freight Plan.

9 TRAFFIC MANAGEMENT AND CONTROL

9.1 Introduction

In the broadest sense urban traffic management and control comprises traffic control systems, with the integrated application of intelligent transport systems (ITS) technology and various aspects of information management and enforcement systems.

The application of these systems and technologies is geared towards maximising the efficient and safe use of existing infrastructure.

This section of the ITP reviews the current status and development proposals in traffic management and control highlighting those aspects that form part of the Implementation Plan for the ITP.

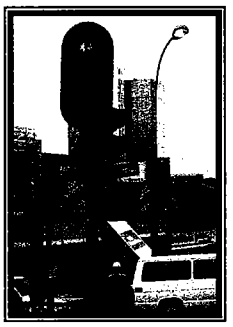
9.2 Urban Traffic Control (UTC) System

Urban traffic control

Currently there is a contract in progress to replace the approximately 700 traffic signal controllers in eThekwini Municipality, which are now in excess of twenty years old and beyond serviceable limits. Part of this contract involves the upgrading of the in-station (centralised computer) which controls some 400 signals in an Area Traffic Control (ATC) system with dedicated cable connections to a central computer .

Real time control

Within the ATC system the Victoria Embankment is under real time adaptive control using the software program call SCOOT. This is the most heavily trafficked arterial in the metropolitan area and benefits greatly from real time control. In 2005/06, there are plans to extend SCOOT control to the heavily congested intersections at Umgeni and Inanda Roads with the N2 freeway service road. In the short term future Argyle Road between Brickhill and Cowey Road will also be brought onto the system.



Real time traffic control for prioritised movement of public transport and possibly emergency vehicles is also under consideration using BUS SCOOT.

Bus/Hov priority pilot

It may be necessary to test this system in a pilot project, however to date, no specific location has been identified. An element of such a pilot will be variable message signing (VMS) for changing use of the dedicated bus and/or HOV lane in peak and off-peak conditions.

The need for enforcement would be important to this type of operation with number plate recognition using CCTV. This would be a fully integrated system with the TIDE data base (discussed in Section 9.3) enabling automated issuing of traffic fines for misuse of dedicated PT lanes.

Variable message signing

Apart from the above, VMS can be applied to a number of different traffic management applications. Currently, an installation on the Southern Freeway is used for providing route guidance and navigation information. However, combined with a system for automatic incident detection using inductive loops and traffic event loggers (TEL) the VMS facility could be used to provide valuable information to drivers who could consider alternative trip routing.

Traffic incident information, automatically detected by traffic event loggers would be received at the traffic control centre, where the central computer is located. This system can automatically classify the type of incident and alert relevant emergency services with the necessary information.

LED signal heads

An important aspect of the UTC upgrade programme is the proposed installation, over a three year period, of LED signal heads which reduce maintenance costs and dramatically increase signal visibility for drivers in all weather conditions.

9.3 Integrated Data Base

Increasingly the complexity of traffic management analysis and solutions requires integrated data sets of various categories of traffic-related data.

Integrated data base

In Year 2000 Durban initiated Phase 1 of an integrated data base called TIDE. The primary focus of Phase 1 scheduled for completion in 2004 was to link existing traffic databases including: —

• Traffic signals database

• Traffic accident database (incl. locations database)

• Traffic volumes database

• CCTV database

• Area Traffic Control System database

GIS and LAN capabilities were introduced as part of the above.

Subsequent phases of development of TIDE will consider potential use and applications of this tool for analysis purposes and real time as well as passive information communication to road users and enforcement.

Future development of TIDE

9.4 ITP Programme

Currently the UTC signal system upgrade and LED signal heads are the priority projects for the first ITP.

ITP 2004/05 projects

The ongoing development of TIDE and the roll-out of various pilot projects requiring additional CCTV installations and/or extended communication links between central control and the outstation locations will form a part of future versions of the ITP.

10 RURAL TRANSPORT STRATEGY

10.1 Introduction

Section 3.5.8, The Rural ABM District, gives some key perspectives relating to rural issues.

Some 68% of eThekwini's Municipal area can be considered as rural in nature. This means that a rural transport strategy for eThekwini is essential.

68% of municipal area is rural

The ETA is busy preparing a rural transport strategy at present. This section will therefore highlight some of the existing issues that have been identified, and give an indication of the development of the full transport strategy.

10.2 Identification of Key Issues

General rural issues that need to form a background to a transport strategy: —

General rural issues

- High unemployment
- Difficult terrain making transport difficult
- Lack of connectivity

The following transport issues have been identified and need to be addressed in a transport strategy: —

- Road improvements focussed on accessibility
- Formalisation of public transport facilities to provide locations for trading and other services
- Extending public transport services to provide greater coverage
- Road safety, especially with regard to pedestrian movements and visibility
- Dealing with transport for the disabled
- Responsibility and provision for scholar transport, including issues of "bakkie transport"
- Non-motorised transport, including walking, cycling and animal drawn vehicles
- Levels of service that are appropriate for rural transport

Transport issues

10.3 Development of a Rural Transport Strategy

It is critical that the rural strategy be developed within the framework of the rural component of the NLTSF. There needs to be a focus on improved access to social services, education, markets and business support services. It is envisaged that it will be crucial to develop viable transportation services from villages to rural service centres. One of the critical pillars will need to encompass the management of transport infrastructure and services to support economic and social sector clusters. The notion of identifying a robust pilot project to test some of the ideas would be seriously considered.

Improved access to services & opportunities

11 SPECIAL PROJECTS

11.1 Introduction

Apart from projects identified in the various sections of the ITP and consolidated in the Implementation Plan — Section 13, there is a category of projects that qualify as Special Projects. These are 1) The People Mover System and 2) projects primarily focussed on meeting transport needs for the 2010 FIFA World Cup.

11.2 The People Mover Project

11.2.1 Objective of People Mover System

This project is planned as a tourist focussed public transport system and service in the Durban CBD, connecting key activity centres in that area of the City.

The existing public transport system and services to the Durban CBD serve the needs of daily commuters and the introduction of a prioritised public transport CBD distribution system, Project 7 in the Implementation Plan, will significantly enhance public transport services for commuters with CBD origins/destinations.

People Mover System in CBD

Whilst this system provides a measure of mobility in the CBD for tourists, it does not focus specifically on the needs of this group.

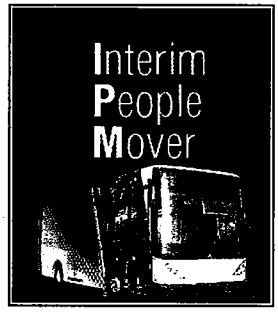
The concept of the People Mover System is to provide the alternative of an upmarket system and service with levels of convenience, comfort and security expected by tourists travelling in any first

world city throughout the world. The objective then is to ensure tourists can reach various interest and activity destinations in the CBD using such a public transport system.

11.2.2 Phased Implementation

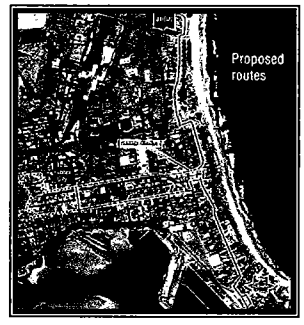
It is intended to develop and implement the People Mover System on a phased basis.

The capital and operating cost along with the complexity of implementing such systems preclude introducing such technology and levels of sophistication in the short term. Consequently, as an interim 3 year solution, a pilot system will be introduced based on the use of state-of-the-art midibus vehicles operating in mixed traffic along defined routes in the CBD.



Ten such vehicles with seated capacity of 35 will be used to provide this service. These vehicles will be fully air-conditioned, with a spacious seating configuration, and fully accessible for wheel chair passengers. CCTV camera surveillance on-board and at terminals will ensure a high level of personal security.

Drivers will be highly trained in areas of vehicle operation and in communicating with tourists thereby ensuring a safe and pleasant trip for the passengers.



The route system will comprise two routes; one along the beachfront, the other extending from a timed-transfer point of this route through the CBD as far as the Warwick Triangle. These routes will link together tourist accommodation and facilities along the beachfront, uShaka Marine World, the beachfront Casino, the ICC, and Central Shopping and accommodation.

The point of transfer from the beachfront to the east-west route will be a high-security user convenient facility where through-ticketing and timed transfers will ensure minimum wait time.

This pilot people mover will be evaluated in terms of cost, utilisation and projected demand. If warranted, a more sophisticated system (eg. trams or monorail) will be proposed.

The People Mover System will also be integrated into the World Cup 2010 transport strategy.

11.2.3 Implementation Programme

Tenders have been received for the system vehicles which will be owned by eThekwini Municipality. The service will be operated under contract to the Municipality, and it is anticipated that a functional system will be operational before year end, 2005.

11.3 2010 FIFA World Cup Projects

Various transport projects form part of the transportation strategy for the 2010 Soccer World Cup. Apart from meeting the transport needs of this event benefits for the City overall will be realised both before and after the event.

11.3.1 Location of the Stadium

Based on an assessment of various criteria Kings Park was selected as the best location for the World Cup event. Assessment criteria included: —

- Minimise total origin-destination travel distance
- Minimise total travel time
- Ability to connect to high capacity public transport network and modes
- Impact on long term usage patterns
- Requirements to be fully operational within the planning period

Features of the Kings Park location were seen to be: —

- The site is located near the high capacity public transport system (rail), which is a FIFA requirement for any match
- 60% of eThekwini Municipality is within 30 minutes of the stadium

World Cup 2010

• The stadium is located along the north-south priority transportation corridor, although pedestrian linkages are poor

• The existing stadium and infrastructure are in place, though modifications to the stadium and road and rail infrastructure are needed

• Large areas of parking are available although provision would be needed for additional capacity

11.3.2 The Transportation Strategy

The transportation strategy comprises a number of projects and initiatives. Infrastructure projects include: —

• An upgrade of Argyle and Stanger Street intersection

• Upgrade of rail stations at Crossmoor, Hilary, KwaMashu and Umlazi

• A new rail station at Kings Park

World Cup 2010

• Improved access from the Western Corridor via the Cannongate overpass through Warwick Avenue area

• The Walnut Overpass

• Various minor intersection upgrades

• Airport to Reunion Station link

• Airport to City road based public transport system

Other related projects include: —

• Upgrade of rail rolling stock

• Intelligent Transport System (ITS) solutions to minimise traffic congestion and access time to/from the stadium and priority public transport signalisation to facilitate public transport movement in the CBD

• A rationalisation and extension of the available parking supply for the event

• Rationalisation and accommodation of pedestrian movement activities in the area

Some of the projects in the transportation strategy form an integral part of the ITP programme (Section 13) others will be funded by extraordinary funding related to the World Cup.

11.3.3 Legacy of the Transport Strategy

Post 2010 transport legacy

Major benefits will be realised in the post 2010 transportation system. These include, an improved public transport system and in particular the north-south rail system which is the backbone of the proposed public transport system in the ITP.

Major congestion and safety issues in the Warwick Junction area will be overcome with the construction of the Cannongate overpass. In addition the ITS solutions will improve traffic operations in the area as will various intersection upgrades proposed as part of the strategy.

12 FUNDING STRATEGY

12.1 Introduction

Need for efficient transport system

Increasingly world-wide the importance of having an efficient transport system is recognised in terms of the vital role transport plays in economic and social development. As an essential catalyst for development the road network must be in a sound condition as an underdeveloped or poorly maintained network will act as an inhibiting factor on sustainable development. Equally the quality of life for urban residents and their ability to access social and economic opportunity is largely determined by the transport system serving the community. In this regard public transport is of particular importance.

This section of the ITP looks at current and possible future funding sources for capital projects in the transport sector. Within this context, limitations and a possible longer term strategy for a way forward are also considered.

12.2 Current and Historical Context

12.2.1 The Issue of Underfunding

It has long been acknowledged that lack of sufficient funding resources for the transport sector is one of the key obstacles to implementation and delivery.

Impacts of under funding

Poorly functioning transport systems directly and indirectly constrain economic growth and accessibility to opportunity for both urban and rural area residents.

Negative impacts include inter alia: —

• Poor mobility and unaffordable transport, in particular impacting on the urban poor;

• Freight movements being retarded through congestion, delays and unpredictability, difficulty in conducting business and poor accessibility to labour markets;

• Efficiency reduction, such as non-business time lost to congestion, traffic accidents and air pollution;

• Long journey times for commuters.

12.2.2 Historic and Current Funding Levels

Historically insufficient funding from all levels of government in eThekwini Municipality has created a major backlog in the provision of public transport systems, and support infrastructure as well as in upgraded and new road construction and maintenance.

Historic/current funding

The following table shows the level of expenditure on transport infrastructure over the past five years, as funded from direct and indirect revenue sources. In order to see the change in funding levels the table is presented in terms of real value, benchmarked to year 2000.

Table 12.1 Transport Infrastructure Funding Years 2000-2004 (Real Values based on Year 2000)

Source	R Millions per Year				
	2000	2001	2002	2003	2004
Budget: Direct					
Municipal Capital Roads & Transport	147.2	164.1	141.0	276.9	293.5
Special Grants (NDOT & KZN DOT)	0	0	15.8	2.8	5.8
Sub Total — Direct	147.2	164.1	156.8	279.7	299.3
Budget: Indirect					
Parking Meters/Bays	0	0	0	0	0
Parking Fees/Rentals	0	0	0	0	
P.T. Office Rentals	0	0	0	0	
Bus Rank Permits	0	0	0	0	
Taxi Rank Permits	0	0	0	0	
Bus Shelter Advertising	0.3	0.3	0.3	0.3	0.3
Hire of Traffic Signals	0.3	0.3	0.3	0.3	0.4
Accident Report Sales	0	0.4	0.6	0.5	0.6
E.T.A. Penalties (Bus Contracts)	0	0	0	0	2.0
Contract Bus Adverts	0	0	0	0	0
Sub-Total Indirect	*0.6*	*1.0*	*1.2*	*1.1*	*4.3*
TOTAL	**147.8**	**165.1**	**158.0**	**280.8**	**303.6**

12.3 Potential Funding from Existing Sources

The potential for establishing an adequate and sustainable source of funding in the present context is briefly discussed below: —

• **eThekwini Capital Budget:** Funds allocated to ETA (old Traffic and Transportation Department) for implementation projects should continue. Given competing demands on the budget from other sectors the size of the allocation is far from certain. Notably in real terms the funds have decreased and will continue to do so unless there is a significant increase in the actual budgetary allocations.

• **Roads Provision Department:** similar to above.

• **Special Grants:** Received on ad hoc project specific basis and are obtained from a variety of sources, both public and private. The only one likely to continue is the Asipephe (Road Safety) project. All these are an uncertain source of funding.

Potential funding existing sources

• **Parking Meters/Bays:** New contract being negotiated but even after the consolidations of all parking meters and bays into a single administrative unit it may be difficult to justify any portion of the revenue, even if there was in increase in fees, coming to the ETA for implementation projects. Revenue stream expected to remain around R500 000 per annum.

• **Parking Fees/Rentals:** Fees charged for roadside parking in selected areas outside of the old Durban Municipal area. With the rationalisation of service fee structures and administration these will fall away.

• **Public Transport Office Rentals:** This small amount of revenue will probably be incorporated into a maintenance contract once this has been re-negotiated.

• **Bus Rank Permits:** Existing revenue amounts likely to be in the same order as it is premature to increase permits until after the restructuring process has taken place.

• **Taxi Rank Permits:** Similar to Bus Rank Permits. To achieve full cost recovery in the foreseeable future is unlikely.

• **Bus Shelter Advertising:** Has potential for generating greater amounts of revenue of which a portion could be directed towards an implementation fund.

• **Hire of Traffic Signals:** Will generate ongoing small amounts of funds from KZN, SANRAL and PORTNET with no scope for any significant increase.

• **Accident Reports:** Sales of accidents reports will generate a constant annual flow of revenue. The charge for a report has remained fixed for a number of years as charges are subject to National legislation. However, most of the funds will go towards administration. **Potential funding existing source**

• **ETA Penalties:** This a monthly payment received from contracted bus operator(s) for defaults on performance agreements. Is likely to remain in the same order and may increase if new contracts are awarded in the future.

In general the direct budget allocation for implementation projects is unlikely to rise significantly and in real terms likely to decrease. Earmarking general budget funds for road infrastructure lends itself to a certain amount of uncertainty and unpredictability in the consistency of the flow of funds. Supplementing this indirectly from eThekwini controlled, transport related revenue sources shown in Table 12.1 has limited impact on funding high capital costs of maintaining and improving road infrastructure. Furthermore much of this revenue is used to cover administration costs and the potential for generating further revenue from these sources or diverting a portion of these funds towards infrastructure improvements is relatively small.

12.4 Potential of Additional Locally Generated Revenue Sources

In the context of the levels of funding required to maintain and improve the effectiveness and efficiency of the road transport network and public transport systems, the direct budgetary capital funding allocation for ETA transport infrastructure projects is inadequate, even with the addition of funding from existing indirect sources.

In the absence of adequate funding from existing revenue sources new methods of generating funds have been investigated. These alternative funding sources to those presently feeding into the general budget, which could be targeted towards transport infrastructure projects, are discussed below. It is strongly recommended that funds generated by any of these sources should be dedicated to transport projects and not as a means of raising general revenue. **New local funding sources**

• **Private Off-Street Parking**: This option targets the private motorist through a levy on private parking and is supportive of the user pays principle. Political acceptability and the impact on businesses and future developments would need to be taken into account in settling the scale of the parking levy. However, if the levy is applied to a broad stream of land-uses it can be fairly modest in nature whilst still deriving substantial revenue.

The annual revenue that can be expected is in the order of R17 million generated from a R10 per month per bay levy across all land uses. Targeting office, industrial zones and parking garages only, which targets the main peak period traffic generating zones would generate around R8 million per annum. Shopping areas, where there is a high local intensity of activity, although most of the traffic impact occurs in off-peak times, could be the single largest generator of funds with an annual amount of over R6 million.

• **Office Rentals:** A possible alternative to the private parking bay levy is one that can be related to general office rentals or extended to industrial locations. This levy can be related to the Town Planning Requirements as to the number of parking bays per 100m squared of property being rented. **New local funding sources**

• **Municipal Advertising:** This can take on many forms to a greater or lesser degree associated with transport. It could include such items as bus shelters and benches, taxi rank branding and street name advertising. At present all Municipal controlled advertising is in the process of being centralised such that all funds will be consolidated and administered under one roof. The contractual agreement is at the expression of interest stage for each category of advertising. Depending on the winning tender it could be expected that advertisements effected on transport facilities could generate initially a modest sum of R1 million per annum but could be expected to increase fairly rapidly each year to be in the region of R8 to R10 million.

• **Traffic Fines, Electronic Enforcement:** This is essentially a law enforcement and administration issue. However, it also falls within the arbit of the Road Safety Plan including its administration and as such a portion of the fines could be channelled away from the enforcement/general budget.

• **Weighbridge Fines:** Overloading of freight vehicles causes serious damage to the road network. The use of weighbridges to evaluate the extent of vehicle overloads along with appropriate fines could act as a deterrent, thereby alleviating the problem. The one Municipal owned weighbridge in Bayhead sets an example in this regard but needs revamping on its enforcement procedures to establish itself as an overloading prevention device. The funds raised will address some of the maintenance costs arising from overloaded vehicle damage. **New local funding sources**

• **Contract Bus Advertising:** Advertising on buses contracted to the ETA to operate a service can generate a significant revenue (around R1 million per annum on present contracts) but accessibility to revenue may only be a possibility when the existing contracts come up for renewal in 5 years time, or unless new contracts are awarded.

• **Development Levy:** A levy raised on new property developments and collectable on plan approval.

12.5 External Funding Sources

A number of possible external funding sources could contribute to specific transport infrastructure projects. These sources would fall outside the mainstream municipal transport budgeting sources.

Each is discussed briefly below: —

• **Funding Agencies, Development Banks:** The following are institutions amongst others, who target transport infrastructure projects: —

- World Bank
- UK Overseas Development Association
- European Investment Bank
- African Development Bank
- Australian Agency for International Development
- Canadian International Development Agency
- Development Bank of South Africa

External funding sources

In general to qualify for funds a complex procedure follows a set of rules and guidelines which need to be in compliance with the necessary criteria for eligibility. The criteria follow strict requirements that qualify the project in terms of economic, social and environmental considerations. Projects aimed at improving accessibility, poverty alleviation and economic development are likely to rate more highly than other types of projects. The funds are however, in essence "soft" loans which are redeemable and the financing of such needs to be carefully structured in order not to compromise the general pool of funds for other projects.

• **Banking Institutions:** An innovative way to fund transport projects is from a local banking institution. Funding can be offered against the balance sheet of the Municipality on a project financed Public-Private Partnership basis or anywhere within that spectrum. Key principles would apply, including the possibility of ring-fencing a revenue stream as a means of redemption. Large sums of funds are available, subject to project approval. A local example of such an arrangement is that of Durban Water's recycling project.

• **KZN Growth Fund:** This fund is dedicated towards projects that facilitate economic growth and development and is applicable to projects of strategic and significant value in line with KZN's Development strategy. A transport infrastructure project could fall within the realm of this fund, subject to proper motivation, particularly if it was related to improving the efficiency of freight movements or improving the competitive edge of the region. Significant, on going funds of around R1 billion per annum are likely to be made available to all sectors involved in economic development. It is a sustainable funding source, a portion of which can be applied for on an annual basis.

External funding sources

• **KZN Municipal Infrastructure Grant:** This source can provide sustainable funds, increasing annually for projects targeting social upliftment and economic development. Whilst concentrating on poverty alleviation motivation may be justified on the ground of accessibility to employment, social and recreational facilities.

• **Specific Taxes and Levies:** Related to the concept of the user pays principle. The concept could relate to generating funds using a simple two part tariff comprising primarily of an access fee (vehicle licence fee and a supplementary heavy vehicle levy) and a user fee (a fuel levy and fines for overloading). Extra spending of roads could then be financed by extra payments by road users. The perception is that road users in general are willing pay into a road fund provided the money is in fact spent on roads.

The most applicable surrogate component of the user pays principle is that of a fuel levy or a surcharge on licence fee. It is simple to collect (taxed at source), reflects on the distance travelled and use of roads is proportionate to the type of vehicle in terms of consumption (both private and commercial) and for a small levy can generate a large and sustainable amount of funding (3 cents a litre on fuel would generate around R50 million per annum). But this concept, which is probably the most efficient and equitable surrogate means available for direct payment for roads, has been investigated for a number of years and to date has been blocked by National Government.

External funding sources

Funds can also be generated from alternative funding sources such as levies on non-users who benefit from improvement and expansion of the road network. Such levies could be in the form of a payroll tax or surcharge on property tax either generally or more specifically located. Commercial development and exploitation of land if in conjunction with road improvements, could also bring in sizeable funds. The scope for raising debt finance has be considered and the appropriate debt instrument evaluated.

12.6 The Way Forward

In summary, the current situation reflects the following: —

• There is indication of an expected direct expenditure cut on transport of some 40% (Year 2004 to 2005);

• There is a growing need for capital investment in the transport systems and currently there is a backlog which current funding levels do not address;

Way forward

• The extent of future municipal capital allocations to transport by direct and indirect funding is uncertain; indicative budgets suggest a shortfall in funding needed for the 5 Year ITP implementation plan;

• There are a variety of other potential sources for raising funds for transport at the local level; some of these based on the user pays principle. The fundamental question of such funds being dedicated to transport needs to be considered;

• There are a variety of potential external funding sources with varying requirements for repayment depending on the source and nature of the funding. Some of these have been used but only to a limited extent. **Way forward**

Against this background it is clear that unexploited and unexplored sources to date need to be pursued as part of a comprehensive funding strategy. Increasingly these is recognition of the need and support for the 'user-pays' principle and where applicable this should be carefully evaluated.

Pilot funding projects may be possible and in this regard a programme will be investigated and developed.

In many instances change of legislation is required and in some instances policy at national and/or provincial levels must also need to be changed.

These are clearly initiatives which require a co-ordinated effort from local government to secure the necessary changes from senior levels of government.

13 IMPLEMENTATION PLAN 2005-2010

13.1 Introduction

This section sets out the short term, 5 year programme of capital projects for eThekwini Municipality for the following sectors of the transport system: —

• Public Transport

• Road Safety **Format of Implementation Plan**

• Freight

• Traffic Management

• Roads

The consolidated schedule of costed projects is prioritised with cashflow for the 5 year period 2005/06 to 2009/10. In addition the expenditure is shown for 2004/05. The source of identified projects and the prioritisation process are described below.

Amongst the above transport sectors, public transport stands out as the sector that requires a long term strategy framework to contextualise and define the short term programme. Key aspects of this long term strategy for public transport are described in this section. A more comprehensive, detailed description is found in Section 5 of the ITP.

13.2 Project Identification and Prioritisation

13.2.1 Project Identification

Projects in the consolidated list of transport projects are sourced from all planning departments in the Municipality as well as external provincial and national Departments of Transport, the Ports Authority, Airport Company SA and SARCC.

The inclusion of projects "funded by others" is important, as collectively these with the projects requiring funding from the Municipal capital budget represent the entire programme of capital projects for the ITP. In particular, rail initiatives that must be funded by SARCC/NDOT need to be highlighted as they are essential to the implementation of related projects funded by eThekwini. (Refer 13.4) **SARCC/NDOT funded projects**

13.2.2 Project Prioritisation

The team participating in prioritisation of the consolidated list of projects included all relevant departments in the Municipality, and the Department's of Transport, all of whom were represented on the Working Group for the preparation of the ITP. Consequently, representatives were familiar with the different transport components of the ITP having attended various presentations of the sectoral plans.

The identification and prioritisation of the projects was considered in terms of the development imperatives of the IDP. **IDP**

The process also recognised the advent of the 2010 World Cup and the need to ensure transport solutions are in place for that event. **World Cup 2010**

Collectively, public transport, road safety, freight and traffic management projects that need Municipal funding account for less than half of the Municipal budget funding requirements. The balance relates to road projects promoting economic development, unlocking bottlenecks, improving accessibility and increasing capacity. **Municipal funding fo 5 Year programme**

In the event of Municipal budget funding shortfalls, some of the prioritised projects shown in the ITP may need to be funded in the following year(s).

13.3 Five Year Implementation Programme

The five year programme for transport capital projects is shown in Table 13.1. Required expenditure for each project is shown on an annual basis. Current expenditure (2004/05) is also shown.

Whilst not specified in the ITP it needs to be recognised that capital expenditure has the related need for an increase in the operating budget; the nature and extent of the operating budget depending on the type of capital projects in the programme (eg. new 'booze buses' in the Safety Programme also require manpower and other resources).

At the same time it should be recognised that delaying capital expenditure on needed projects can place undue pressure on other related infrastructure with an associated increase in maintenance costs.

Table 13.1 eThekwini Integrated Transport Plan Capital Projects and Cash Flow: Proposed 5 Year Programme 2005-2010

Ref No	Project Category and Description	Cost Est (R mill)	Current 04/05	5 Year Programme Requirements (R millions) 05/06	06/07	07/08	08/09	09/10	Total	Expected Funding Source
Public Transport Projects										
Public Transport — Rail		**772.8**							**652.8**	
1	Replacement of rail rolling stock removed from service, by 10M's over 5yrs commencing	06/07	600.0			120.0	120.0	120.0	120.0	National
2	Rail extension to Link City — operational by 2010	150.0		12.0	38.0	50.0	50.0			National
3	Kings Park Rail Station	2.8				2.8				National
4	Bridge City PT interchange	20.0					20.0			PPP
Strategic PT System		**158.8**							**156.2**	
5	Various Projects iro Fundamental Restructuring					17.4	50.0	70.0		Metro
6	Call Centre			2.0	16.8					Metro
Public Transport — TDM/Priority		**11.0**							**9.0**	
7	CBD PT circulation system incl traffic management system				1.0	8.0				Metro
Public Transport — Taxi Holding Areas			**5.2**							**5.2**
8	Umgeni/Churchill Road			2.5						Metro
9	Canberra/Williams Road			2.5						Metro
10	Bluff Road			0.2						Metro
Public Transport — Rural Ranks		**34.0**		**4.0**	**3.0**	**10.0**	**10.0**	**7.0**	**34.0**	**Metro & Rural ABM**
11	Inchanga									Metro
12	Adams									Metro
13	Ngcolosi									Metro
14	Umzinyathi									Metro
15	Umkomaas									Metro
16	KwaSomubi									Metro
17	Molweni									
18	Mpumalanga									
19	Umgababa									Metro

Public Transport — Urban Ranks	**59.6**							**55.6**	
20	Hillcrest Taxi Rank		3.7							Metro
21	Albert Luthuli Rank — Phase 1		0.3							Metro
	— Phase 2			0.5	3.0	2.0				Metro
22	Natal Technikon Rank			0.5	1.0	2.5				Metro
23	KwaMnyandu Rank			0.5	0.5					Metro
24	Kingsburgh Rank					1.5	2.0			Metro
25	Mansfield (Bus) Rank						12.0			Metro
26	Canongate Rank						3.5			Metro
27	Cartwright Flats North Rank						3.8			Metro
28	Mangosuthu Highway @ Road 1202							2.0		Metro
29	Isipingo Rail Rank							5.8		Metro
30	Merebank Station Rank							0.8		Metro
31	Toti CBD Rank							3.0		Metro
32	Phoenix CBD Rank							4.5		Metro
33	Gateway Rank							3.2		Metro
34	Tongaat Rank							1.5		Metro
35	Verulam CBD Rank							1.5		Metro
Public Transport — Shelters/Laybys	**18.3**							**15.8**	
36	Various Locations		2.5	0.8	1.0	6.0	4.0	4.0		Metro
Public Transport — Sidewalks/Lanes/etc		**41.0**							**36.0**	
37	Various Locations		5.0	4.0	7.0	8.0	9.0	8.0		Metro
Public Transport — Pedestrian Bridges		**27.0**							**24.0**	
38	Various Locations		3.0	4.0	4.5	4.5	5.5	5.5		Metro
Public Transport — Ablution Facilities		**6.5**							**5.0**	
39	New & upgraded facilities		1.5	1.0	1.0	1.0	1.0	1.0		Metro
Public Transport — Special Needs	**21.0**							**21.0**	
40	Infrastructure			1.0	5.0	5.0	5.0	5.0		Metro
Public Transport — Taxi Recap	**3.0**							**3.0**	
41	Modify existing ranks for Recap						3.0			Metro
Public Transport Projects — Summary	From Mun. Capex Budget			23.5	43.8	65.9	110.8	120.8	364.8	
	Other Funding			12.0	158.0	172.8	190.0	120.0	652.8	
	PT Totals			**35.5**	**201.8**	**238.7**	**300.8**	**240.8**	**1017.6**	
Road Safety Projects									**64.9**	
42	Six Vehicles for dedicated safety unit	1.1		0.6	0.5	-	-	-	1.1	DMPS Budget
43	2 New "Booze" buses Budget	2.0		-	1.0	1.0	-	-	2.0	DMPS
44	Vehicles for dedicated RSEO	1.1		-	-	0.6	0.5	-	1.1	DMPS Budget
45	Haz Chem routes (signage, markings, limited roadworks)	2.0		2.0					2.0	Metro
Road/intersection improvements (local traffic safety)		37.2							34.2	
46	Various Locations		3.0	3.0	7.2	8.0	8.0	8.0		Metro
Traffic calming — higher order roads		22.0							19.0	
47	Various Locations		3.0	2.5	3.0	4.5	4.5	4.5		Metro
Traffic calmIng — lower order roads		18.0							5.5	
48	Various Locations		12.5	0.5	1.0	1.0	1.5	1.5		Metro
Roads Safety Projects — Summary	From Mun. Capex Budget			8.0	11.2	13.5	14.0	14.0	**60.7**	
	DMPS Funding			0.6	1.5	1.6	0.5	-	**4.2**	
	Safety Totals			8.6	12.7	15.1	14.5	14.0	**64.9**	
Freight Projects	**83.4**							**45.5**	
49	Edwin Swales (M7) (N2-Titren)		34.6							Metro
50	Bayhead Rd Ext. over S. Freeway		3.3	2.5	18.0	20.0				Metro
51	Freight management infrastructure					5.0				Metro
Freight Projects — Summary	From Mun. Capex Budget			2.5	18.0	25.0	-	-	**45.5**	
	Other Funding			-	-	-	-	-	-	
	Freight Total			**2.5**	**18.0**	**25.0**	**-**	**-**	**45.5**	

Traffic Management Projects		**100.7**							**81.6**	
52	ATC System Upgrade		13.6	13.0	13.0	4.0				Metro
53	Intersection Signalisation		3.1	2.7	3.4	4.0	5.5	6.0		Metro
54	LED Installation Programme		2.4		2.0	2.0	10.0	16.0		Metro
TM Projects — Summary		From Mun. Capex Budget		15.7	18.4	10.0	15.5	22.0	81.6	
		Other Funding		-	-	-	-	-	-	
				15.7	**18.4**	**10.0**	**15.5**	**22.0**	**81.6**	

Note: WC 2010 projects are mostly included in other sections of this table. A full list of WC 2010 projects will be found in Chapter 11.

Ref No	**Project Category and Description**	**Cost Est (R mill)**	**Current 04/05**	**05/06**	**06/07**	**07/08**	**08/09**	**09/10**	**Total**	**Funding Source**
Roads Projects									**1860.8**	
55	Southern Freeway Rehabilitation	55,0	20.0	35.0						Metro
56	Western Freeway Rehabilitation	90.8	3.8	40.0	47.0					Metro
57	M4/Quality Street Interchange	30.0	12.5	1.0						Metro
58	Outer West Road Improvements		3.0	8.0	17.5	16.2				Metro/KZN
	Existing Local Roads Projects including: — (Refer also to Ref. No. 77)									
59	— Nazareth residential roads	6.2	5.2	1.0						Metro
60	— Carrick Road upgrade incl new bridge	6,0	6.0							Metro
61	— Intake Road bridge	1.9	1.9							Metro
62	— Dassenhoek rural roads	5.7	5.7							Metro
63	— Matwabula Road upgrade	6,0	6.0							Metro
64	— other	1.4	1.4	15.0	25.0	45.0				Metro
65	North Coast Road — from	85,0								Metro
	Stanhope Rd to Blackburn Rd	33.8	33.8							Metro
66	Rural Community (EPWG) Roads Prog. (Phase 2)									
67	Point Rd/Shepstone Rd one way pairing	135,0		55.0	80.0					Separate
68	New major road MR577 from KwaDabeka to Duff's Rd	450,0		150.0	150.0	150.0				KZNDOT
69	N3 lane balance between N2 & Westville Interchange	20.0					20.0			NRA
70	N3 lane balance between Westville I/c & Paradise Valley I/c	5.0					5.0			NRA
71	Hans Dettmann/Wiltshire Rd intersection	2.0					2.0			KZNDOT
72	Rural Community (EPWG) Roads Prog (Phase 3)	51.6		51.6						Metro
73	Stanger St/Argyle Rd Interchange	65.0		2.0	25.0	31.0	7.0			Metro
74	Musgrave Rd & Essenwood Rd one way pairing	1.5		1.5						Metro
75	Brickfield Rd Upgrading — Sparks Rd to N3	32.0			10.0	22.0				Metro
76	Cato Manor Arterial North (M10) — N3 to Booth Rd	63.0			2.0	26.0	35.0			Metro
77	Cato Manor Arterial South (M10) — M7 to Booth Rd	73.0			1.0	22.0	25.0	25.0		Metro
78	Higher Order Road Rehabilitation	98.0				30.0	33.0	35.0		Metro
79	N2 Interchange Upgrades — short term	5.0			4.0	1.0				Metro/NRA
	plus NDOT contribution to above	1.0?				1.0?				
80	Nandi Dr — North Coast Rd to Malandela Rd (2+2 Lanes)	40,0	10.0	20.0	10.0					Metro
81	Existing Local Roads Projects (Refer 54-59)	22,0		11.0	11.0					Metro
82	Rural Comm (EPWG) Roads Prog (Phase 4)	10.0			10.0					Metro
83	Cannongate (elevated) — Inbound	97.5		0,5	2,0	47,5	48,0			Metro
84	Cannongate (elevated) — Outbound	101.0				49.0	52.0			Metro

85	Berea and N-S Link	27.0					27.0	Metro
86	Rural Comm (EPWG) Roads Prog (ongoing)	10.0			10,0			Metro
87	Booth Rd (M32) Spine Rd to Francois Rd	50.0				50.0		Metro
88	Francois Rd (M32) — Booth Rd to University	8.0				8.0		Metro
89	D403 Ext — Inanda to R102 Verulam	10.0				10.0		Metro
90	North Coast Rd (R102) Upgrade — Verulam to Phoenix	25.0				25.0		Metro
91	South Coast Rd (R102) from Bayhead to M7	4.0				4.0		Metro
92	North Coast Rd through Mt Edgecombe	15.0				15.0		Metro
93	Umhlanga Rocks Dr/Northway Intersection	5.0				5.0		Metro
94	Improved connections from Newlands W. Dr. (M23) to MR577	5.0				5.0		Metro
95	Inanda Rd (M21) at NPC factory	8.0				8.0		Metro
96	Inanda Arterial West	70.0					70.0	Metro
97	Inanda Arterial East	70.0					70.0	Metro
98	La Mercy I/c on N2 freeway with link to R102, as part of new King Shaka airport & iDube Tradeport	40.0				20.0	20.0	NRA/ KZNDOT

Roads Projects — Summary	From Mun. Capex Budget	186.6	164.5	300.7	330.0	227.0	1208.8
	Other Funding	205,0	230,0	150,0	47.0	20.0	652.0
	Roads Total	**391.6**	**394.5**	**450.7**	**377.0**	**247.0**	**1860.8**
CAPITAL PROJECTS — SUMMARY	From Mun. Capex Budget	236.3	255.9	415.1	470.3	383.8	1761.4
	Other Funding	217.6	389.5	324.4	237.5	140.0	1309.0
	Total Funding	**453.9**	**645.4**	**739.5**	**707.8**	**523.8**	**3070.4**

Increased expenditure on public transport

Table 13.2 is a summary of the municipal budget allocation to each transport sector for each of the five years in the short term programme. In terms of the programme cost estimates municipal expenditure on public transport would increase from approximately R23 million in Year one to R107 million in Year 5 an increase from 9% of the total budget to 34%. This expenditure excludes the considerable expenditure from national government on upgrade and expansion of rail service in the North-South Corridor, a commitment essential to the roll out of related public transport projects funded by the Municipality in Years 3 to 5.

Table 13.3 is a summary of all expenditure required from the Municipal capex budget plus funding from other sources including private and public sectors.

Total expenditure in 5 year long

During the five year short term programme a major investment in rail is needed and expected from national funding augmented by considerable Municipal investment in support of the development of a cost effective, efficient public transport system. The only other transport sector where external funding is expected is the roads programme where 37% of the funding is expected from NDOT, KZNDOT and the private sector.

Table 13.2 Summary of Municipal Budget Allocation by Transport Sector Five Year Programme 2005-2010

		R millions by Year					
		05/06	06/07	07/08	08/09	09/10	TOTAL
Public Transport	Total from Munic. Budget	23.5	43.8	65.9	110.8	120.8	364.8
	% of Total Budget	10%	17%	16%	24%	31%	21%
Safety	Total from Munic. Budget	8.0	11.2	13.5	14.0	14.0	60.7
	% of Total Budget	3%	5%	3%	3%	4%	3%
Freight	Total from Munic. Budget	2.5	18.0	25.0	-	-	45.5
	% of Total Budget	1%	7%	6%			2%
T.M. (Incl. ATC)	Total from Munic. Budget	15.7	18.4	10.0	15.5	22.0	81.6
	% of Total Budget	7%	7%	2%	3%	6%	5%
Roads	Total from Munic. Budget	186.6	164.5	300.7	330.0	227.0	1208.8
	% of Total Budget	79%	64%	73%	70%	59%	69%
Total All Sectors	236.3	255.9	415.1	470.3	383.8	1761.4	
Municipal Capital Budget	100%	100%	100%	100%	100%	100%	

Table 13.3 Summary of Proposed Expenditure by Transport Sector — All Funding Sources Five Year Programme 2005-2010

R millions by Year		05/06	06/07	07/08	08/09	09/10	TOTAL
Public Transport	Total from Municipal Budget	23.5	43.8	65.9	110.8	120.8	364.8
	Funding from Other Sources	12.0	158.0	172.8	190.0	120.0	652.8
	Total	**35.5**	**201.8**	**238.7**	**300.8**	**240.8**	**1017.6**
	% of Total Budget	8%	31%	32%	42%	46%	33%
Safety	Total from Municipal Budget	8.0	11.2	13.5	14.0	14.0	60.7
	Funding from Other Sources	0.6	1.5	1.6	0.5	-	4.2
	Total	**8.6**	**12.7**	**15.1**	**14.5**	**14.0**	**64.9**
	% of Total Budget	2%	2%	2%	2%	3%	2%
Freight	Total from Municipal Budget	2.5	18.0	25.0	-	-	45.5
	Funding from Other Sources	-	-	-	-	-	-
	Total	**2.5**	**18.0**	**25.0**	**-**	**-**	**45.5**
	% of Total Budget	1%	3%	4%			1%
T.M. (Incl ATC)	Total from Municipal Budget	15.7	18.4	10.0	15.5	22.0	81.6
	Funding from Other Sources	-	-	-	-	-	-
	Total	**15.7**	**18.4**	**10.0**	**15.5**	**22.0**	**81.6**
	% of Total Budget	3%	3%	1%	2%	4%	3%
Roads	Total from Municipal Budget	186.6	164.5	300.7	330.0	227.0	1208.8
	Funding from Other Sources	205.0	230.0	150.0	47.0	20.0	652.0
	Total	**391.6**	**394.5**	**450.7**	**377.0**	**247.0**	**1806.8**
	% of Total Budget	86%	61%	61%	54%	47%	61%
Total All Sectors	**453.9**	**645.4**	**739.5**	**707.8**	**523.8**	**3070.4**	

13.4 Long Term Context for Short Term Programme

The transport sectors of Road Safety and Traffic Management whilst driven by both short term and long term objectives tend to limit project identification to short term 3-5 year programmes reviewed and rolled forward on an annual basis.

The Freight Plan is in the early stages of preparation and can only identify short term projects at this time. As this planning evolves further a long term framework will undoubtedly emerge which will provide the context for identifying additional projects in the short term programme.

The Roads Plan for the short term is the incremental development of a long term (Year 2020) roads plan for the eThekwini Municipality.

Need for long term PT strategy

To a greater extent than the other sectors, public transport projects need to be introduced as part of a total system. To avoid abortive expenditure short term projects must form part of the progressive development of a long term public transport system solution for the area. For this to happen the Municipality requires a defined public transport strategy which responds to the imperatives in national policy and legislation and defines the role and positioning of public transport modes in the system.

eThekwini developed such a strategy in their project on Fundamental Restructuring of Public Transport.

Rail in N-S Corridor strategy

This strategy for a cost-effective, inter-modal system is documented in Section 5 of the ITP. Briefly stated, the strategy is structured around a rail focussed system along the North-South Coastal Corridor and an optimised road-based system in other parts of the Municipality.

In the North-South Coastal Corridor defined in the Public Transport Plan, rail is planned as the backbone of a multi-modal integrated system of bus/taxi feeder services to a high standard rail, linehaul service.

Role of bus

Bus and taxi services in direct competition with rail will be removed and bus will play a support role in the North-South Corridor. In areas removed from this corridor, the bus system and service contracts will be rationalised and bus services optimally placed using appropriate size buses (from 35 seater Re-cap buses to full size buses).

Role of taxi

The role of mini-bus taxi in the public transport strategy will be re-focussed to provide a service of quick turnaround routes where operators can improve levels of profitably. This will include feeder-distribution services in support of rail in the North-South Corridor as well as a range of services in other parts of the system.

Legalisation & regulation

Ensuring effective delivery of such a system and service requires a fully legalised and regulated taxi service, operating with reliable, safe equipment. The roll-out of the Re-cap programme commencing in 2005 will give impetus to this objective.

Comprehensive PT strategy

This broad strategy for public transport is supported by strategies which address the needs for non-motorised transport and special needs passengers ensuring a comprehensive needs-driven solution to public transport in eThekwini Municipality. Overall it creates the framework within which a cost-effective short term programme for public transport projects is identified.

14 MONITORING STRATEGY & KPI's

14.1 Introduction

Monitoring of some aspects of the ITP will be carried out using key performance indicators (KPI's). These are set out in the relevant sections of the Plan but summarised in this section for convenience.

14.2 KPI's

The following are KPI's that apply to different aspects of the ITP: —

Section of ITP	Targeted Area	KPI's
4. Transport Demand Management	• Congestion monitoring	• volume/capacity • level of service
5. Public Transport	**Effective Public Transport:**	
	• Passenger satisfaction with public transport service	• No of complaints/1000 passengers per month
	• Promotion of use of public transport	• Modal split (% of motorised transport users on public transport in peak period) • Average age of subsidised bus and commuter rail coach fleet
	• Promotion of access to public transport	• Kilometers of roads used for PT per hectare in rural areas
	• Promotion of accessibility to public transport	• % of households spending more than 10% of disposable income on public transport
	• Accommodation of Special Needs Groups	• No of corridors with fully accessible P.T. • Number of dedicated vehicles for special needs • % of contracted bus fleet fully accessible in select areas still to be determined
	Efficient Public Transport:	
	• Efficient PT operations	• Average travel time to work for all public transport commuters
	• Efficient bus operation	• Average no of passengers carried per subsidised bus per day
	• Efficient rail service	• Average number of rail passengers per service per day
5. Public Transport (Cont.)	• Taxi-Recapitalisation progress	• % of minibus taxi fleet re-capitalised
	• Good delivery of public transport projects	• % of capital projects delivered within time and budget
	• Effective regulation and control of public transport vehicles Sustainable Public Transport	• % fully legal public transport operators

	• Road-based public transport service regulation and legislation	• % of services operating with a fixed route permit
	• Land-use restructuring	• Development density along PT priority corridor(s)
	Safe & Secure Public Transport:	
	• Improved public transport security	• Reported incidents monthly per 10 000 passengers
	• Improved public transport safety	• Various KPI's from Road Safety Plan (as below)
	Black Empowerment in Public Transport:	
	• Extent of ownership and participation in public transport and related activities	• Number of contracts and value by type of contract
	• Procurement of services	• % of budgets allocated to PDI firms
7. Road Safety	**General:**	
	• All Accidents	• 10% reduction in the 3 year average
	• Pedestrian accidents 5-19 age group in the Road Safety Management Areas:	• 10% reduction in the incidence and severity of pedestrian accidents by 2010 • 10% reduction in the pedestrian accident rate (acc/pop)
	• Pedestrian accidents in the Durban CBD	• 10% reduction in the incidence and severity of accidents by 2010
	• Minibus Taxi Accidents in the Road Safety Management Areas: * Umlazi * Chatsworth * Kwamashu * Phoenix * Durban CBD	• 15% reduction in accidents by 2010
	• Driver behaviour: — seatbelt usage — speeding — alcohol	• not yet available
	Engineering:	
	• Hazloc Programme	• 10 a year (budget dependent)
	• Road Safety Audits	• 10 audits a year
	• Before and after studies	• At least 1 every year dependant on resource constraints
	Education:	
	• Knowledge and Behavioural Changes	• Survey of behaviour (before-and-after), % change • Test of knowledge
	• Teach road safety to all children	• No. of children exposed to road safety material • Duration
	• Scholar patrols at all schools where needed	• 10 additional schools per year
	Enforcement:	
	Drivers respect speed limits: • speed timing	• 1000 man hours per month
	• Minimum hours of enforcement	• 60% of DMPS non-dedicated time to traffic enforcement
	No driving over the legal blood alcohol limit : • Deploy Booze Buses • Breathalyzer testing	• 2 road blocks per week (must include pay week end)
	Seatbelts and vehicle fitness: • Check for seat belt compliance and vehicle fitness	• 2 road blocks per week

Emergency Services:	
Improvement of Response times • Collect Response Time data	• Response times
Exposure:	
Raise awareness of road safety: • Road safety awareness campaigns	• Measure behaviour changes in representative sample of target group size (before-and-after)
Evaluation:	
• Review Road Safety Plan	• Review after 3 years (Measure in terms of indicators detailed in this table)

15 CONSULTATION, MARKETING, COMMUNICATION

These are recognised as fundamental components of a successful ITP.

Throughout the preparation of the draft of the ITP input was sourced extensively from local, provincial and national government officials as well as parastatals involved in different aspects of the Plan.

ITP working group

Representatives of the various relevant Municipal Departments as well as the NDOT and KZN-DOT formed part of an ITP working group that met regularly during the course of preparation of this draft document.

Internal consultation

The full consultation process commencing with the internal stakeholders represented on the Working Group was followed by external stakeholder groups not involved in the preparation of the ITP. This major external consultation initiative started in March 2005 and was completed in June 2005. The draft ITP was circulated and presented widely to a number of forums and organisations in order to elicit feedback. The feedback was largely positive.

The following stakeholders were consulted: —

External consultation

- Provincial and National Department of Transport
- National Ports Authority, ACSA, SARCC and Metrorail
- Public Transport operators (minibus taxi, bus and metered taxi)
- eThekwini Transport Forum
- Durban Chamber of Business
- KZN Freight Task Team
- Five public meetings in eThekwini (advertised in the media)

It should be noted that aspects of the ITP (namely; the Public Transport Plan, the Road Safety Plan and the Road Infrastructure Plan) had already been taken to stakeholders as part of the consultation process. These stakeholders included: —

- The eThekwini Transport Forum
- The Public Transport Liaison Structures
- Provincial and National Department's of Transport

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