



## INTRODUCTION

Transport infrastructure plays an important role in economic development, job creation and the alleviation of poverty. Good public transport systems are an essential component of sustainable urban development.

In the Western Cape, transport (of freight and passengers) falls into one of three groups:

- Land transport – includes all motorised road-based modes, rail and non-motorised transport, including walking;
- Maritime transport – concerned with the movement of passengers and goods by sea; and
- Civil aviation – transportation by air.

Vast differences occur within the province with regards to the provision and state of transport. The pressure on infrastructure and services is greatest in urban centres. In rural areas the infrastructure is poorer but under less pressure in terms of user numbers. The main challenge for the province lies in the fundamental restructuring of public transport to a system that addresses a range of mobility needs, such as social, recreational and business needs (PGWC, 2003a).

**This theme focuses on the following issues:**

- provision of safe and efficient public transport; and
- provision, maintenance and upgrading of transport infrastructure.

## DRIVERS AND PRESSURES

Some of the driving forces and pressures that influence transport in the Western Cape include:

**Settlement patterns** – the inefficiencies of urban and rural settlements have major implications for the provision of public transport services. For the poor, it means long costly journeys to access employment and other services. Low density and dispersed settlements in both urban and rural areas are difficult to service economically.

**Past planning imbalances** – as a result of past planning practices the impetus is to improve access to services for marginalised communities through the provision of appropriately located basic facilities (e.g. schools and clinics) and the improvement of transport services and links. Low demand volumes remain a key challenge in the provision of sustainable and affordable services in rural areas.

**Cost** – many of the province's poor incur high transport costs to access basic services. Public transport subsidies currently only apply to rail and commuter bus services in urban areas.

**Increased private car usage** – the growth in private vehicle usage has resulted in increased congestion and environmental deterioration in urban areas, particularly atmospheric pollution in the Cape Metropolitan Area (CMA).

**Globalisation** – the opening up of domestic markets to foreign competition has increased the strategic value of transport, thereby facilitating export and import businesses. The greater degree of communication with the global economy also supports other growth sectors such as tourism.

**Tourism** – political stability and the extraordinary diversity and beauty of South Africa, especially in the Western Cape, is attracting many local and foreign tourists. There is increasing pressure on transport infrastructure to support this sector.

**Institutional structures** – considerable fragmentation and division of responsibilities for planning and management of the overall transport system exists. A plethora of authorities and agencies are involved, leading to inconsistency, overlap and confusion.

**Deterioration of transport facilities and networks** – the age of the public transport fleet and the condition and capacities of transport services and networks are critical. Investment is needed to support transport for commuters, trade and tourism as well as other activities and major events in the Province, such as the 2010 Soccer World Cup.

## ISSUE: PROVISION OF SAFE AND EFFICIENT PUBLIC TRANSPORT

Public transport is a basic need for a large proportion of the population of the Western Cape. In the CMA (where about 70% of the population of the province resides) approximately 56% of the population use public transport to get to work and for other trips. This translates into almost 500 000 people travelling to and from work daily on public transport (PGWC, 2003a and 2003b).

Census 2001 data confirms that in many district municipalities of the Western Cape, nearly as many commuters use public transport as use private transport. The overwhelming majority of commuters walk or cycle (to work) in all district municipalities except the CMA. These municipalities tend to be more rural with less frequent transport services and lower car ownership levels (Figure 15.1).

The commuter train network in the Western Cape, operated by Metrorail, services 118 stations mainly in the CMA. Cape Town Station is the hub of the network and accommodates 600 trains and 147 500 passenger trips per day. In total, Metrorail accommodated 251 300 commuters a day during the morning peak hours in 2000 (City of Cape Town, 2003). Buses and minibus taxis provide more flexible means of transport, as they reach outlying areas on a large number of routes. Outside of the rail network they are the main mode of available public transport.

Besides the availability and efficiency of public transport, safety and security of passengers is another important consideration. Safety and security are compromised by accidents and crime. They cause human anguish, affect people's ability to access facilities, services and jobs and affect the efficiency of the

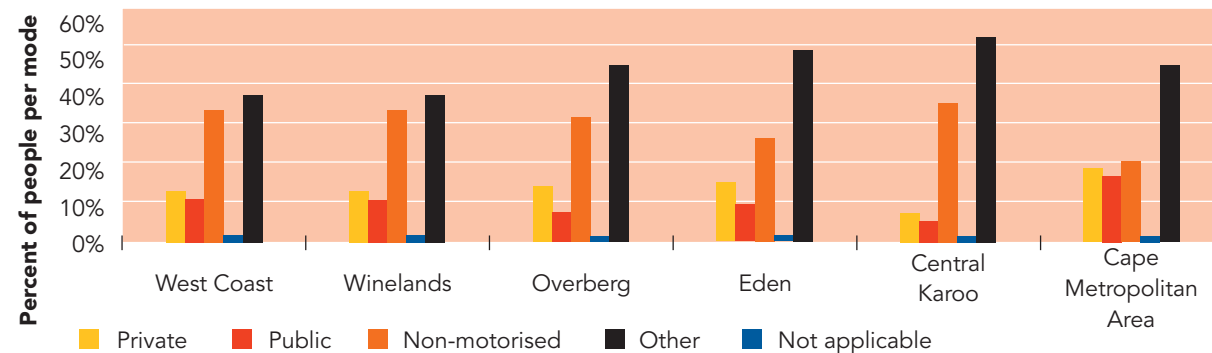


Figure 15.1: Mode split for commuter trips, 2001 (Source: Stats SA, 2001)

transportation system through induced congestion and delays. In 2001, 503 cases of crime on public transport were reported in the CMA. These comprised 179 incidents of theft, 122 assaults, 34 murders and 5 rapes (City of Cape Town, 2003).

## STATE

### Number of registered public transport operators

Table 15.1 gives an indication of the number of public transport operators and vehicles in the private public transport sectors (bus, minibus taxis and private taxis) in the province.

As indicated in Table 15.1 the minibus sector is the most fragmented amongst the privately operated sectors of public transport provision. There are 7 600 operator licences for minibus taxis in the Western Cape. The minibus sector also provides the highest capacity amongst private public transport sectors. The 12 663 vehicles in operation have the capacity to transport approximately 165 000 passengers (assuming a capacity of 13 passengers per vehicle). Minibus taxis operate at 59% capacity during peak periods (City of Cape Town, 2003). Recently there have been a number of violent incidences in this industry, which make this form of public transport less safe for passengers and drivers.

The number of buses in operation is only 10% that of minibus vehicles. Nevertheless the 1 308 buses in operation have the capacity to transport approximately 100 000 passengers (assuming a capacity of 75 passengers per vehicle), or 60% of



the minibus passengers. However minibuses are able to serve lower density areas, as they require fewer passengers. Buses operate at 43% capacity during peak periods (City of Cape Town, 2003).

The private taxi sector has the smallest number of operators and the lowest capacity. The 606 vehicles in operation have the

capacity to transport approximately 2 500 passengers (assuming a capacity of 4 passengers per vehicle). There are some imbalances in the regional allocation of operator and route licenses, which leads to an oversupply of public transport in some areas and to a lack of travel opportunities in other areas.

### Number of public transport-related accidents as a percentage of all accidents

The average annual number of accidents involving minibuses or buses increased by 6.2% between 2000 and 2002 (PGWC, 2003b). Table 15.2 shows that although a large proportion of the population uses public transport, this form of travel accounts for a very small percentage of accidents 7% in total. In terms of road safety, public transport can thus be considered much safer than other forms of travel.

**Table 15.1:** Registered public transport operators in the Western Cape (Source: PGWC, 2003b)

	Number of operator licenses in issue	Actual number of vehicles in operation
<b>Buses</b>	2 000	1 308
<b>Minibus taxis</b>	7 600	12 663
<b>Private taxis</b>	750	606

**Table 15.2:** Number of accidents by transport mode (2002-2003) (Source: PGWC, 2003)

Mode	Accident severity				
	Fatal	Serious	Slight	No injury	Total
Public transport	252	923	3 922	20 540	25 637
Other	2 385	7 497	43 147	284 281	337 310
<b>Total</b>	<b>2 637</b>	<b>8 420</b>	<b>47 069</b>	<b>304 821</b>	<b>362 947</b>
% of public transport accidents of total	10%	12%	9%	7%	7%

### IMPACTS

- An actual or perceived lack of safety on public transport could deter the public from using public transport. Low demand volumes make public transport less economically viable.
- Inefficient and unsafe public transport and traffic congestion adversely affect the economy due to lost workdays and the cost of emergency services.
- Poor public transport has implications for planning and land use, such as having to increase road capacity and provide large parking lots etc.

## ISSUE: PROVISION, MAINTENANCE AND UPGRADING OF TRANSPORT INFRASTRUCTURE

Estimates indicate that public investment in transport infrastructure (road and rail, excluding airports and harbours) accounts for only about 1.1% of the Western Cape's GDP as opposed to the generally accepted 2.0 to 2.5% of GDP (World Bank 2001).

### STATE (Roads)

Road infrastructure is a major asset which facilitates economic and social interaction throughout the province and beyond.

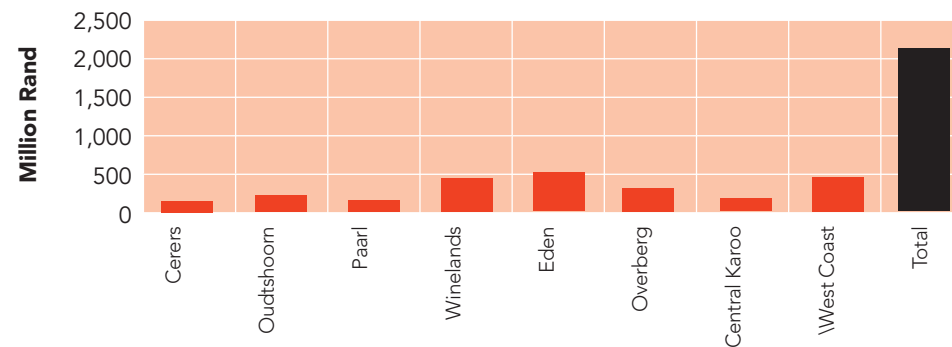
The proclaimed road network within the province consists of 6 350km of surfaced roads, 10 420 km of unsurfaced roads and 21 000 km of unsurfaced minor roads (PGWC, 2003b). Roads are fundamental for development, and a certain level of road quality needs to be maintained in order to promote growth and provide basic access and social mobility.

### Financial backlog in road maintenance

The current level of funding for preserving the road network in the Western Cape is inadequate. The total capital maintenance and rehabilitation backlog in 2002/3 was estimated at R2 142 million. In 2003, the average 5-year



capital fund allocation required to meet current standards was calculated at R976 million per annum, far below the R427 million allocated, suggesting that the backlog is growing (PAWC, 2003). The figure below shows the 2002/03 Western Cape road maintenance funding backlog compared to the funding considered necessary to maintain the road network to the minimum standard acceptable to the PGWC Road Infrastructure Branch (PAWC, 2003).



**Figure 15.2:** Road maintenance funding backlog compared to funding required to maintain the network at a minimum acceptable standard. (Source: PAW, 2003)



**Table 15.3:** Number of TEU's handled at the Port of Cape Town for 2001 and 2003. (Source: NPA, SA Ports Operations)

		2001	2003	Growth Rate
<b>Landed</b>	<b>Full</b>	148 112	189 732	28%
	<b>Empty</b>	104 954	79 862	-24%
	<b>Total</b>	<b>253 066</b>	<b>269 594</b>	<b>7%</b>
<b>Shipped</b>	<b>Full</b>	183 766	217 542	18%
	<b>Empty</b>	59 204	43 507	-27%
	<b>Total</b>	<b>242 970</b>	<b>261 049</b>	<b>7%</b>
<b>Grand Total</b>		<b>496 036</b>	<b>530 643</b>	<b>7%</b>
<b>% of capacity of 450 000 TEUs</b>		450 000 TEUs	110%	118%



#### STATE (Ports)

There are three commercial harbours in the Western Cape Province, namely the ports of Cape Town, Saldanha and Mossel Bay.

- The Port of Cape Town is South Africa's second largest harbour. It is a general cargo port and a key terminal used for exporting deciduous fruit, perishable and frozen products.
- The Port of Saldanha is primarily an ore-export terminal. Expansion of this terminal is being planned to cope with growing demand.
- Mossel Bay harbour is an active fishing harbour with limited commercial cargo activity. More recently, it has started to service an increasing number of ships for the emerging oil industry. The port does not have a container terminal.

#### Number of containers (TEUs)<sup>42</sup> moved as a proportion of container capacity

Periodic bottlenecks at the container terminal in the Port of Cape Town have been blamed on operational inefficiency rather than infrastructure capacity. However, the port is operating close to its capacity which is 450 000 TEUs (City of Cape Town, 2002). As a result of the increase in TEUs handled at the Cape Town harbour, the Port Plan has identified a need to expand the container terminal, and planning is at an advanced stage.



**STATE (Airports)**

Most visitors to the Western Cape arrive at the Cape Town International Airport. During the last five years, both the international arrival and departure terminals have been improved, providing sufficient capacity for the medium term.

George airport serves mainly visitors to the Southern Cape area with more than 250 000 passengers passing through the airport each year (ACSA).

**Passenger movements vs. the capacity of the terminals at Cape Town airport**

Both the international and domestic terminal at the Cape Town airport operated within capacity in 2002 (2010 Soccer Bid Book). The international terminal however had significantly more capacity to accommodate medium term future growth than the domestic terminal. The domestic terminal is therefore the focus of current initiatives to upgrade the airport.

**Table 15.4:** Passenger peak hour traffic for Cape Town International Airport (Source: 2010 Soccer Bid Book)

Year	International		Domestic	
	Departing	Arriving	Departing	Arriving
2002	768	824	840	823
Approximate hourly capacity	1 200	1 200	850	850
% of capacity	64%	69%	99%	97%

**IMPACTS**

- Poorly-maintained road infrastructure has a number of negative impacts, as it increases vehicle operating costs and travel times due to delays. Poor access to markets has a negative impact on economic growth. In particular more remote communities rely on the road network to access services and facilities.
- A lack of port capacity to handle TEUs and other shipping goods has a negative impact on trade and the economy. It reduces options for developing and expanding new markets and reduces the Western Cape’s economic competitiveness.
- Although adequate at the moment, a lack of airport capacity in the future, could reduce the quality of customer service and have a negative impact on tourism development of the Western Cape.

### Summary and Status of Indicators Used in this Chapter

Transport Indicators	How we are doing?	Comments
Number of registered public transport operators.	N/A	Status quo/ baseline data.
Number of public transport-related accidents as a percentage of all accidents	😊	The number of public-transport accidents are only 7 % of all accidents.
Financial backlog in road maintenance	😞	The road maintenance funding backlog is increasing.
Number of containers (TEUs) <sup>43</sup> moved as a proportion of container capacity	😞	The port is operating at close to capacity, and experiences bottlenecks.
Passenger peak hour traffic for Cape Town International Airport	😊	Operating within capacity with capacity to accommodate medium future growth.

### Indicators Suggested For Future Monitoring

- The number of people using public transport as well as the operational capacity of public transport modes, needs to be monitored on an on-going basis for trends to be established.

## RESPONSES

The table below summarises some of the legislation and other initiatives that have been implemented in response to the transport issues discussed above:

<b>National</b>	<ul style="list-style-type: none"> <li>• The National Land Transport Transition Act requires information, strategies and plans towards delivery of an affordable, accessible and reliable public transport system.</li> <li>• Arrive Alive campaign aimed at reducing the carnage on the roads.</li> <li>• Taxi recapitalisation: a plan to replace the country's ageing taxis with modern, safer vehicles. Subsidies for the taxi industry can also be investigated upon its regulation.</li> <li>• Rail consolidation, tabled before the Parliamentary Committee on Transport will look at consolidating Metrorail and SARCC by April 1 2005.</li> <li>• The National Rural Transport Strategy aimed at delivery of rural transport infrastructure and services.</li> </ul>
<b>Provincial</b>	<ul style="list-style-type: none"> <li>• Rural Mobility projects such as the Central Karoo and George mobility projects, the provincial non-motorised transport strategy, and the provincial strategy for transport of special needs passengers.</li> <li>• Restructuring of the current subsidised road based public transport system, the recapitalisation of the bus industry and the empowerment of BEE operators.</li> <li>• Strategic infrastructure plan aims to facilitate structured and co-ordinated investment in infrastructure development.</li> <li>• iKapa Elihlumayo, the Provincial Growth and Development Strategy.</li> </ul>



- Klipfontein rapid bus system is a mobility project being planned in Cape Town. It entails the development of a bus rapid transit system along the Klipfontein corridor with dedicated bus lanes and an all day service.
- Safer trains projects which included provision of closed circuit cameras.
- Statutory planning, the first round of completed statutory plans for the local authorities will provide plans and projects and priorities for funding and implementation of transport projects.
- New domestic terminal for Cape Town International airport (CTIA) is planned for completion by about 2006. It will be capable of handling in excess of 1200 passengers per hour, either arriving or departing.
- Rationalisation of the parking area for CTIA is currently in the planning and design stage. This will consolidate disparate pockets of parking zones into one and simultaneously increase total capacity.
- A detailed concept design has been prepared by ACSA for additional aprons opposite the international terminal buildings at CTIA.
- EIA for the planned expansion of the container terminal at the Port of Cape Town.

43. Twenty-foot equivalent units

## LINKS

There is a link between Transport and the following chapters in the report:

**Air quality** – due to increased vehicular use and congestion.

**Urban development** – the physical layout of a city has an influence on travel behaviour.

**Health and Education** – the siting of facilities such as schools and clinics in relation to the demand has implications on accessibility and transportation requirements to access them.

**Economic development** – transport infrastructure supports tourism, agriculture, access to jobs and other economic activities.

**Energy** – the transport industry heavily relies on energy sources such as petrol and electricity to operate.

**Tourism** – there is a need for airports, ports and roads to support the flourishing tourism sector.

**Safety and Security** – road accidents and personal safety at public transport facilities are among the main concerns affecting the attractiveness of public transport.

## CONCLUSION

The public transport infrastructure for commuters in the Western Cape is relatively well developed, especially within the CMA. The province has a large number of commuter public transport operators and transport modes (train, minibus taxi, bus and metered taxi). Approximately half of all commuters using motorised transport in the province travel on public transport. The demand for public transport



is therefore likely to rise in the future with the continued growth of population and commuter numbers in the province. Private motor vehicle use is increasing rapidly, causing traffic congestion in urban centres, particularly in the CMA. Safe and efficient public transport is thus of utmost importance for the economic and the social development of the Western Cape.

There are a number of issues that need to be addressed in the commuter public transport system, including passenger safety, and the inefficient distribution of operator licences across geographical areas, which leads to an oversupply or lack of public transport in different areas. Taxi recapitalisation and restructuring projects which are underway should help

to improve safety and reliability of minibus taxis and the current subsidised commuter transport system.

The transportation infrastructure network in the Western Cape is highly diverse, with roads, harbours and airports all contributing to the connectivity in the province. Nevertheless, there are concerns regarding inadequate funding for road maintenance, which may lead to a degradation of road condition to below minimum acceptable standards. The Cape Town harbour and domestic airport terminal both appear to operate at or above capacity and are the focus of expansion plans. The Cape Town international airport seems equipped to accommodate mid-term passenger growth.

