

DEPARTMENT OF TRANSPORT

NOTICE 3317 OF 2025

MPUMALANGA DEPARTMENT OF PUBLIC WORKS, ROADS AND TRANSPORT

REQUEST FOR COMMENTS ON THE FINAL DRAFT PROVINCIAL LAND
TRANSPORT FRAMEWORK 2025 – 2030

I, Thulasizwe Simon Thomo, acting in my capacity as the MEC of Mpumalanga Public Works, Roads and Transport in terms of Section 35 of the National Land Transport Act 5 of 2009, hereby give notice of the publication of the Final Draft Provincial Land Transport Framework and request written public comments.

The comments on the Final Draft Provincial Land Transport Framework may be submitted via:

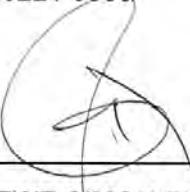
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Comments should be submitted not later than 15th July 2025.

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REPUBLIC OF SOUTH AFRICA



Provincial Land Transport Framework

2025 - 2030



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Abbreviations

AADT	Average Annual Daily Traffic
ACSA	Airports Company of South Africa
AfDB	African Development Bank
AIDS	Acquired Immunodeficiency Syndrome
BMS	Bridge Management System
CAA	Civil Aviation Authority
CBD	Central Business District
CCT	Clean Coal Technology
CCTV	Closed Circuit Television
CITP	Comprehensive Integrated Transport Plan
COGTA	Cooperative Governance & Traditional Affairs
COLTO	Committee of Land Transport Officials
COSATU	Congress of South African Trade Unions
DBSA	Development Bank of South Africa
DCSSL	Department of Community Safety Security and Liaison
DCIA	Delmas Cargo International Airport
DITP	District Integrated Transport Plan
DPWRT	Department of Public Works, Roads & Transport
DRDLR	Department of Rural Development & Land Reform
DORA	Division of Revenue Act
DOT	Department of Transport
EPWP	Extensive Public Works Program
ERBDC	Ermelo-Richards Bay-Durban Corridor
GIS	Geographic Information System
HAZMAT	Hazardous Materials
HAR	Highway Advisory Radio
HIV	Human Immunodeficiency Virus
ICAO	International Civil Aviation Organisation
ICDG	Integrated Cities Development Grant
IDC	Industrial Development Corporation
IFC	Infrastructure Finance Corporation
IMS	Information Management System
IRMA	Integrated Rural Mobility & Access
IRTPN	Integrated Rapid Public Transport Network
ISA	Infrastructure South Africa
ITS	Intelligent Transport Systems
JEC	Johannesburg-eMalahleni Corridor
JSSC	Johannesburg-Secunda-Swaziland Corridor
KMIA	Kruger Mpumalanga International Airport
KNP	Kruger National Park
KPI	Key Performance Indicators
LIC	Labour Intensive Construction
LITP	Local Integrated Transport Plan
LMEFSC	Mpumalanga-Ermelo-Free State Corridor
MCLI	Maputo Corridor Logistics Initiative
MDC	Maputo Development Corridor
MDPWRT	Mpumalanga Department of Public Works, Roads & Transport
MEC	Member of the Executive Council
MFLF	Mpumalanga Freight Logistics Forum

MFTP	Mpumalanga Freight Transport Plan
MGDS	Mpumalanga Growth & Development Strategy
MIG	Municipal Infrastructure Grant
MIIU	Municipal Infrastructure Investment Unit
Min-Com	Political Structure chaired by the Minister of Transport
MMS	Maintenance Management System
MPGP	Mpumalanga Provincial Growth Path
MPLTF	Mpumalanga Provincial Land Transport Framework
MRDC	Moloto Rail Development Corridor
NAFCOC	National Federated Chambers of Commerce
NASP	National Aviation Security Program
NATMAP	National Transport master Plan
NDM	Nkangala District Municipality
NDPG	Neighbourhood Development Partnership Grant
NFLS	National Freight Logistics Strategy
NGO	Non-government Organisation
NHTS	National Household Transportation Strategy
NLTA	National Land Transport Act (2009)
NLTSF	National Land Transport Strategic Framework
NMT	Non-motorized Transport
NPTR	National Public Transport Regulator
NRA	National Road Act
OLB	Operating Licensing Board
PMU	Project Management Unit
PMS	Pavement Management System
PPP	Private Public Partnership
PRASA	Passenger rail Agency of South Africa
PRE	Provincial Regulating Entity
PTNG	Public Transport Network Grant
PWD	Persons with Disabilities
RAMS	Road Asset Management System
RIMS	Road Incident Management System
RISFSA	Road Infrastructure Strategic Framework of South Africa
RNI	Road Network Identification
RRM	Routine Road Maintenance
RWMS	Road Weather Management Subsystems
SAA	South African Airways
SADC	Southern African Development Community
SANRAL	South African Roads Agency Limited
SC	Steering Committee
SDI	Spatial Development Initiative
SMME	Small, Medium & Micro Enterprises
STATSSA	Statistics South Africa
TDM	Travel Demand Management
TFCA	Trans-frontier Conservation Area
TFR	Transnet Freight Rail
Trans-MEC	Political Structure chaired by MEC
TrMS	Traffic Count Management System
TSM	Transport Systems Management
USDG	Urban Settlements Development Grant
UTC	Urban Traffic control

VCI	Visual Condition Index
VGI	Visual Gravel Index
VMS	Variable Message Signs
VOC	Vehicle Operating Company

Executive Summary

Chapter 1 Introduction, Process, and Consultation

The Mpumalanga Provincial Land Transport Framework (PLTF) is a strategic framework that provides high-level guidelines for all modes and levels of land transport in Mpumalanga. It integrates and informs all transport and land-use provincial decisions to ensure that transport planning supports the province's socio-economic development. The framework is designed to achieve the following:

- National and provincial transport development goals and strategies are aligning for transport planning;
- Coordinating and integrating transport planning across all sectors of private, public, and freight transport in the province;
- Integrating preparation and implementation of all manner of transport plans, programs, and projects.
- Enumerates objectives and policies that provide direction to sustainable transport development across the three tiers of state entities responsible for transport i.e. National Department of Transport, Department of Public Works, Roads, and Transport. And all local government planning authorities (Districts and local Municipalities).

The Mpumalanga PLTF is required to comply with the National Land Transport Act (Act 5 of 2009) (NLTA) which states that the Mpumalanga Government (DPWRT) is responsible for preparing a PLTF that is covering a five-year period that must be published in the Provincial Gazette. The Mpumalanga PLTF has been prepared by the "minimum requirements for preparation of Provincial Land Transport Framework" from NLTA.

The Mpumalanga PLTF intends to:

- Give the objectives and policies that will provide direction on the provincial transport network;
- Implement national transport planning objectives and policies that form part of the provincial transport planning objectives;
- Assist in coordinating and integrating transport in the province;
- Serves as the basis for the preparation of Integrated Transport Plans (ITPs) AND Public Transport Plans (PTPs) in the province.

The 2025 to 2029 MPLTF document is not only for transport policy and legislation but will also deal with other selected transport focus areas, including a description of related strategies adopted on a Mpumalanga basis.

Consultative Processes

In keeping with the need for a framework that serves as a guideline for all modes and levels of land transport planning, consultation has to be conducted and it was followed in the development of Mpumalanga PLTF, summarised as follows:

- Communication with key stakeholders across the transport spectrum was conducted including National DoT, DPWRT, District and local municipalities, Minibus Taxi industry, PRASA, Transnet, Bus industry, and other relevant departments in Mpumalanga;
- A review of a wide range of strategic plans and policies such as NATMAP 2050, DoT strategic plan, NLTSE, DPWRT Strategic Plan, DCSSL Strategic Plan, and Integrated Transport Plans (ITPs) from over 10 local government entities;
- A review of numerous reports and studies such as the National Household Travel Survey (NHTS), the Annual State of Logistics Survey for South Africa, Quarterly Performance Reviews (QPRs), and Annual Performance Plans (APPs);
- Formulation of PLTF strategy based on views expressed by different transport officials within the province and other stakeholders;
- Facilitation of consultative public workshops, to which key government officials and public transport operators were invited;
- Summary of issues raised during consultations and public participation and incorporation into the PLTF as required;
- A review of all the PLTF chapters by DPWRT management and relevant stakeholders.

Chapter 2 Transport Vision, Policy, and Objective

The chapter interprets the National Land Transport Strategic Framework (NLTSF), as it relates to the transport policies of Mpumalanga Province. Provincial programmes applicable to the PLTF are summarised in this chapter. It will explore the policies and directions at both national and provincial levels and then highlight possible conflict areas. The objective is to define the overall vision and key priorities of the Mpumalanga Province.

The PLTF strategy for coordinating provincial transport across all modes and sectors was developed in alignment with the following:

1. A legal framework;
2. Strategic and policy framework;
3. Strategic goals and programmes.

The above components are outlined below:

1. The Legal Framework

The key legislation defining the responsibilities of transport management in Mpumalanga is as follows:

- National Land Transport Act 5 of 2009/Act 23 of 2023;
- Road Safety Act, 1972 (Act 9 of 1972);
- National Road Traffic Act, Act 93 of 1996;
- Road Transportation Act of 1977;
- Cross-Border Road Transport Act, (Act 4 of 1998);
- Mpumalanga Road Act (Act 1 of 2008)
- Mpumalanga Road Traffic Act (Act 4 of 1998)
- Road Transportation Act of 1977.

2. The Strategic and Policy Framework

The PLTF needs to align with a vast network of strategic plans and policies, the most important being:

- White Paper on Transport;
- National Development Plan (NDP 2030);
- Draft National Transport Master Plan 2050;
- National Land Transport Strategic Framework;
- Expanded Public Works Programme (EPWP);
- The Province of Mpumalanga lacks an official Transport Policy White Paper. The Department of Transport (DOT) published a White Paper on National Transport Policy in 1996, which was revised in 2021.

3. The Strategic Goals and Programmes

The PLTF needs to align to the vision and objectives of the Department of Public Works, Roads and Infrastructure which aligns to the National policy. In aligning to the vision and the programs, 5 sections were identified:

1. Transport Infrastructure
2. Transport Operation
3. Community-Based Programmes
4. Transport Regulation
5. Security Management

The five sections developed the following goals:

- Enhance accessibility and ensure the safe, affordable movement of people, goods, and services by delivering and maintaining sustainable, integrated, and environmentally sensitive transport infrastructure that supports social empowerment and economic growth.
- Improve community mobility, especially for those with limited or no access, by planning, regulating, and facilitating integrated land transport services
- Oversee the implementation of strategies and initiatives that promote the development and empowerment of communities and contractors.
- To ensure road safety by regulating traffic, controlling vehicle overloading, implementing road safety campaigns, and managing the registration and licensing of vehicles and drivers.

- Enhance compliance with traffic rules among all road users by implementing road safety education and awareness programs.

Based on the above, a series of objectives were developed. The objectives are defined as follows:

1. Enhance Accessibility:
 - Improved movement of people, goods and services
 - Ensure the LITP's of all municipalities are developed and comprehensive.
 - Ensure the DITP documents are completed for the required planning cycles.
 - Adhere to the scholar transport and rural transport strategies.
 - Optimise public transport in the province.
 - Adhere to the freight strategic plan.
 - Align to the National Rail Masterplan 2025
 - Ensure Affordable transport
 - Ensure that public transport is affordable for the most vulnerable road users.
 - Engage with national government of current policies and plans to improve affordability of transport.
 - Integrate transport planning in the province.
 - Ensure that the freight strategies are updated and implemented.
 - Improved access
 - Integrate transport in the province with existing and planned land use.
 - Plan mixed use developments and nodal points.
 - Integrate the tourism strategy to the PLTF.
 - Ensure the LITP and DITP documents are completed.
 - Ensure Scholar and rural transport is accessible and available.
 - Improve Sustainable transport
 - Advance green transport.
 - Promote public transport to be measured as a model increase in public transport.
 - Improved affordable transport.
 - Optimise modal share of transport.
 - Increase connectivity of NMT networks to different modes of transport for both urban and rural communities.
 - Improve Social Empowerment
 - Ensure accesses to communities is increased
 - Ensure affordable public transport to municipalities
 - Ensure access to education through available and accessible public transport integrated through the different modes of transport.
 - Ensure rural transport services for rural communities is accessible and available through the connectivity between NMT and public transport vehicle modes.
 - Increase Economic growth
 - Use transport to improve land value capture.
 - Enhance tourist attractions with transport connectivity.
 - Improve freight efficiencies through appropriate transport planning that aligns to the NRMP.
 - Secure funding for critical corridors and support the development of strategic corridors.
 - Improve safety and security for public transport users as indicated in chapter 11 of this report.
 - Improve safety of road users.
 - Rationalise and integrate public transport.
 - Integrate transport and spatial development planning.
 - Implement the EPWP of roads, NMT and roads infrastructure in the local communities as skills transfer and upliftment.
 - Increase modal share of public transport including aviation.
 - Ensure seamless integration between different modes of transport.
2. Enhance Community Mobility
 - Land use and transport integration through the local and district SDF's.
 - Economic corridors and significant corridors need to be enhanced and supported.
 - Improved links and access to rural areas.
 - Improved road infrastructure through the implementation of the RAMS.
 - Improved access to public transport.

- Improve access to education.
- 3. Improve Road Safety
 - Enforce Traffic regulations.
 - Improve the Overload control on the coal haulage routes and other major and secondary freight routes.
 - Road safety initiatives and programs aimed at educating communities on road safety.
 - Improved road infrastructure through the RAMS project.
 - Reduction in traffic violations through improved and effective law enforcement.
 - Improve NMT infrastructure to reduce collisions between motorists and pedestrians.
 - Improve road safety for NMT users at vulnerable areas such as, but not limited to schools, hospitals, clinics, retirement villages etc.
- 4. Ensure Implementation
 - Rollout of strategic projects based on the PLTF, Provincial Freight Strategy, LITP's, DITP's and the RAMS projects.
 - Prioritise projects for implementation.
 - Secure financial requirements as per the funding strategy to ensure that the strategic and prioritised projects are implemented.
- 5. Improve Law Enforcement
 - Reduce traffic violations through increase law enforcement.
 - Improve safety for public transport users from criminal activity at ranks, stops and on route.
 - Reduce road related collisions.
 - Reduce conflicts between road users including conflicts between different modes of public transport.

Chapter 3 Status Quo of Transport in the Province

The purpose of this chapter is to report on the existing public and freight transport, road safety and demographic conditions of the province. A summary of the existing public transport routes, freight network, operators, road condition and road hierarchy, the traffic volumes on National and Provincial roads and the cross-border operations are provided in this chapter.

Mpumalanga province has a transport network comprising airports, roads, rail, and public transport services. Due to factors such as population growth and economic constraints, transport infrastructure and services face severe challenges.

The Mpumalanga province is the second smallest province in South Africa with a land area of approximately 76 495 km² which is 6.3% of the total land area. The population of Mpumalanga amounts to 8% of the South African population, with an overall provincial growth rate of 1.7%.

Transport Network Overview

- The Mpumalanga province has a total road network of about 24 000 km, with approximately 12% of which are national roads under SANRAL, 58% provincial roads under DPWRT and 30% tertiary roads under local municipalities.
- Road freight dominating the freight sector in Mpumalanga due to deterioration of rail infrastructure and lack of integration of road freight services with rail. This results in burdening the road infrastructure which is causing traffic congestion and shortening the road lifespan.
- The Mpumalanga province generates 80% of the country's coal. Due to failing rail infrastructure in the South Africa, there is a growing trend of transporting coal on the road networks within the province.
- Commuter safety is a major concern. Although road traffic fatalities have reduced by 8% over the last 5 years, it still averages over 1000 p.a.
- Public Transportation is the most cost-effective mode for the people of Mpumalanga Province. Buses and minibus taxis are the primary modes of public transit in Mpumalanga. 29% of the rural population and 31% of urban residents use taxis. There is no local urban rail service in the province.
- Minibus taxis are the dominant provider of public transport services.
- Buses are the second-most popular means of public transportation.
- There are 6 bus firms with interim agreements with the Department of Public Works, Roads, and Transport: Mpumalanga Buscor (PTY) Ltd, Megabus & Coach, Putco Ltd, Thembalethu, Great North Transport, and Tilly's.
- The freight network is essential in South Africa's freight transport system due to significant industries in mining, agriculture, and energy production within the province.

- The Overloading of heavy vehicles in Mpumalanga a major problem on the road network.
- There is high traffic congestion at the border posts specifically at the Lebombo border post

Other challenges facing the transport sector in Mpumalanga include:

Challenge		Description
1	Information System	Provincial Freight Bank and Municipalities associated data are outdated. ITPs are not comprehensive, and they are outdated in Local Municipalities.
2	Land Use	Competition between land uses for forestry, mining, and agriculture
3	Operations: Passenger	No passenger rail transport within the province for local and long-distance trips. Inadequate access to public transport and damaged public transport infrastructure. Inadequate NMT infrastructure and access to NMT modes in rural areas. Inadequate access to learner transport and identifying learner transport needs.
4	Operations: Freight	Inadequate Intermodal facilities to accommodate growth capacity Border posts' operational hours influence congestion at the border crossing and slow infrastructure expansion. Road freight is dominating rail freight.
5	Transportation Infrastructure	Deteriorating transport infrastructure which is making it high maintenance cost. Underutilisation of rail network infrastructure due to high usage of road freight. Rail infrastructure is declining. Inadequate Overloading facilities in Mpumalanga province Implementation capacity constraints of transport infrastructure project.
6	Financial	Lack of funds to address the transportation project implementation. Lack of funds to address implementation of road-to-rail initiatives.
7	Legal	Mpumalanga lacks bylaws that address the movement of freight transport within the province.
8	Institutional	Lack of transport functions at the local municipality level limited capacity.
9	Energy	Reliance on fossil fuels for locomotion and carbon footprint.
10	Environment	Environmental concerns on transportation due to Mining and Agricultural industries. Increased emissions from the transport sector & the implication on the carbon footprint.

There are two planned IPTN's in Mpumalanga. These are the Mbombela and the NDM IPTN plan.

The Mbombela IPTN has been suspended by the NDoT. Furthermore, there was not information received during the PLTF 2024-2029 development regarding the Mbombela CITP or IPTN information.

The NDM IPTN is discussed in section 4.3.3 of this report. A Business plan and operational plan has been developed for the NDM IPTN.

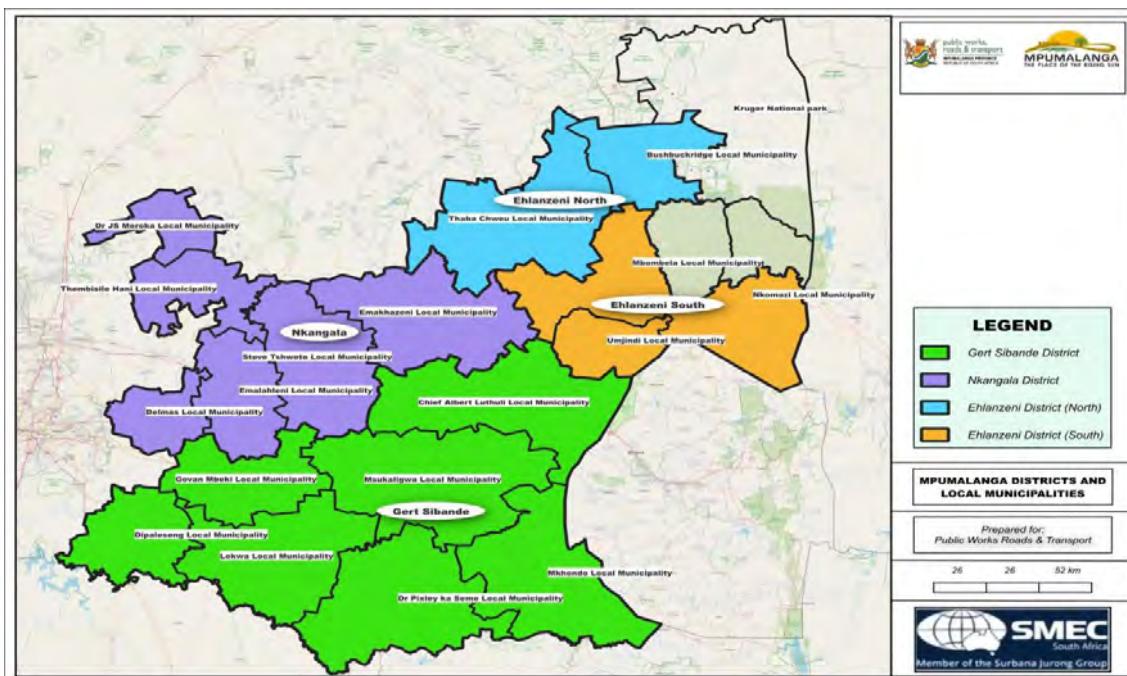
Chapter 4 Integrated Transport Plans

This chapter summarises the existing planning authorities the frameworks and plans required in the province and how they relate to a PLTF. The status of the Integrated Transport Plans (ITP) for the various municipalities with a summary of the projects in the available ITPs.

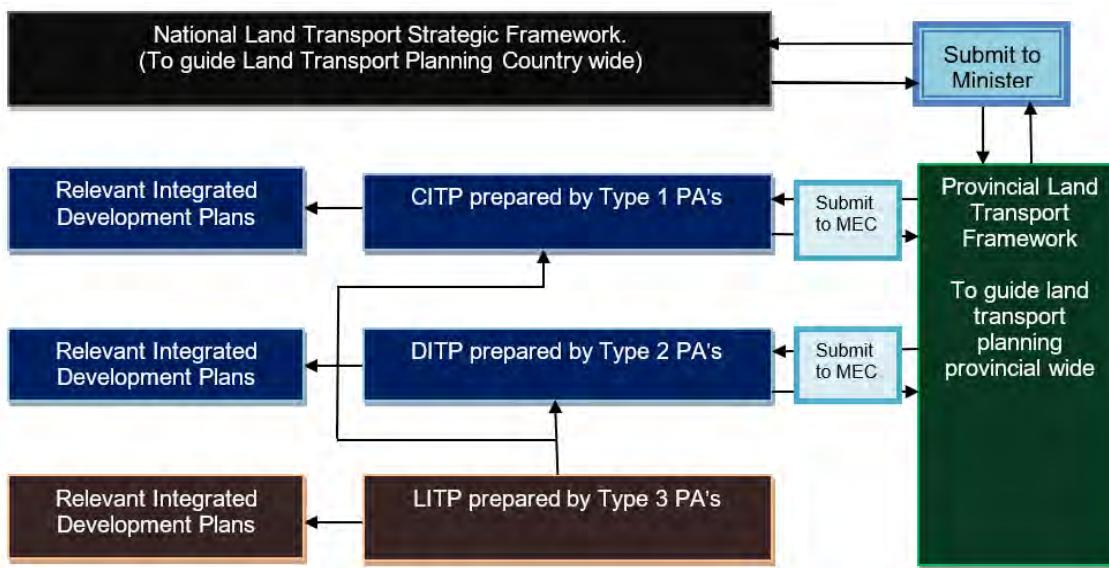
Mpumalanga province comprises three district municipalities the Ehlanzeni, Nkangala, and Gert Sibande District Municipality which is composed of the City of Mbombela and 16 Local Municipalities,

Planning authorities are classified as Type 1/2/3:

- **The Type 1** Planning Authority is the City of Mbombela.
- **The Type 2** Planning Authorities are the three district Municipalities.
- **The Type 3** Planning Authorities are the All-local Municipalities except Mbombela Local Municipality.



The statutory requirements for Integrated Transport Plans (ITPs), and the relationship with provincial (PLTF) and national (NLTSP) plans are illustrated below.



The projects identified in the ITP's documents amounted to the following:

- Ehlanzeni District Municipality
 - 57 projects: budget of R152 252 400.00
- Gert Sibande District Municipality
 - 62 projects: R731 467 109.00
- Nkangala District Municipality
 - RPTN with multiple infrastructure upgrades including 970km sidewalks, 370 stops with a budget of R1 647 175 029.00
 - RPTN is in planning with an established business plan

Chapter 5 Integrated Development Plans

This chapter addressed Land use and transportation integration, which forms the backbone of an efficient settlement pattern. It not only ensures the cost-effective operation of the Mpumalanga Province's transportation system, but it also has the potential to rationalise settlement patterns as settlements tend to concentrate close to major transportation routes. In addition, the Strategic plans and frameworks will be established to effectively ensure transport systems are planned for economic and strategic developments in Mpumalanga.

The achievement of integrated development will require interventions as follows:

- A more updated Mpumalanga SDF is required to support development priorities to reflect needs as proposed on the new PLTF linking programmes and projects to development and strategic goals.
- Providing the guidelines to guide the municipalities on prioritising provincial programmes in the jurisdictions. Municipalities need to develop their ITPs in alignment with their specific development priorities.
- Engagements need to be initiated with Mpumalanga departments and other relevant entities within the province, this is done to address the needs of the SDF and the PLTF strategy with objectives that require all planning and development entities to be identified to ensure that transport plans are incorporated.

In summary, the transport implications and requirements of the proposals need to be defined and transport projects, implied by the proposals, need to be included in the transport implementation projects of the province.

Chapter 6 Public Transport Strategy

This chapter provides summary of the public transport strategies and initiatives that are of provincial importance and are generated by the public transport status quo and the problems, issues and gaps described in the respective DITPs. The goal is to advance and enhance public transportation through transport strategies.

The strategies outlined in this chapter are designed to align with the objectives of the national transportation strategies as well as to the transport objectives of Mpumalanga. The aim is to plan, develop, coordinate, promote, and implement transportation policies, laws, and strategies to establish an integrated, sustainable, reliable, and safe transportation system. This chapter seeks to identify the challenges, needs of transportation users and the required strategies to improved public transport in the province.

Key Challenges

- Dissatisfaction with taxi, and bus services
 - dissatisfied with the facilities at the taxi rank, e.g. shelters 33,9%.
 - dissatisfied with the waiting time for taxi 30,1%.
 - dissatisfied with the taxi fare 28,7%.
 - dissatisfied with the security on the walk to/from the taxi rank 26,8%.
 - dissatisfied with the facilities at the bus stop, e.g. toilets, offices (47,6%) and the level of crowding in the bus (46,7%).
 - Other notable issues:
 - The distance between the taxi rank/route and home.
 - The distance between the bus stop and home.
 - The roadworthiness of taxis was of most concern in Nkangala.
 - Security at the bus stop was a concern.
 - Availability of bus information was of concern in Nkangala and Gert Sibande DM's.
- Factors influencing the household's choice of transport.
 - Almost all three district municipalities mentioned travel cost as their biggest factor influencing their choice of travel mode, followed by travel time.
- Ownership of bicycles and/or access to cars.
 - About forty-thousand households owned between one and three bicycles.
- Technical expertise is lacking in managing the Local Integrated Transport Planning process. This indicates that there is an urgent need to develop transport planning technical skills at the local and district municipal levels.
- Some of the communities have limited mobility and insufficient access to major economic activities.
- Passenger Rail of South Africa (PRASA), which oversees the concession process and manages operations on behalf of the national government, is currently in charge of rail planning at the national level. The

Provincial Government has not been involved in the cancellation of some passenger services, which presents a barrier to rail planning in the province.

- Private operators and a handful of government agencies operate on subsidised bus contracts. The Provincial Government manages these operations. Bus planning in the province is challenging, and concerns have previously been expressed about limited services and contracts that have been in place for a long time.
- The Republic of South Africa is linked to neighbouring countries through national and provincial roadways, with the infrastructure being damaged due to excessive vehicle overloading. Strengthening traffic control capacities is crucial.
- The consolidation of existing dispersed routes into focused corridors that connect major origin and destination nodes to accommodate users.
- The lower-class communities necessitate basic public transport services, including access to the nearest appropriate employment centres, health and education facilities, shopping, and other social services.
- Bus Companies Concerns
 - Service delivery strikes affects the operations.
 - Bad road condition along the routes operated on.
 - Trucks are utilising the bus stops as the truck stops.
 - Vandalization of bus stops infrastructure within Ehlanzeni.
 - Need for universal accessibility at the bus stops.
 - Conflict with the Taxi industry.
 - Safety of passengers on and getting to the bus stops
 - Funding issues.
 - Lack of bus shelters at bus stops
- Taxi Industry concerns
 - Rank facilities challenges:
 - There's a lack of multimodal ranking facilities within the province.
 - The ranking facilities within the developer's area (e.g. Malls) do not meet the rank facility standard.
 - These areas require development of the proper ranking facilities at the informal rank operational space.
 - There is a lack of ablution blocks at the existing rank facilities.
 - There's a lack of hawker's zones at the ranking facilities.
 - Majority of rank facilities have problem with shelters or the lack of shelters.
 - There is a shortage of rank offices and pay point stations at the ranks that include long distance operations.
 - There are safety issues for both commuter and operators at the ranks.
 - Lack a security fencing at rank facilities.
 - Operational Challenges:
 - There is a lack of loading zone/embayment along the public transport routes.
 - The road conditions are bad along the most of the public transport routes within the province.
 - Impounding of vehicles (MBT), while bad road condition is damaging vehicles.
 - There is a lack of shelter at their loading bays.
 - Speed humps implemented along public transport routes not done according to size specification and are damaging MBT.
 - General Challenges within the taxi industry:
 - Taxi industry is not subsidised.
 - The illegal operations (Avanza's) invading the taxi's operational space (Local & Long Distance)
 - Vehicles that are not regulated are operating as the Scholar transport within the province.
 - Issuing of illegal OL for passenger vehicles for both members & non-members of the associations.
 - 60% rate of vehicle repossession due to effect of illegal operations.
 - Duplication of vehicle registrations operating as public transport.
 - Low-rate p/km on scholar transport claim.
 - Potential area of Improvements

- Development of ranking facilities in different regions in Mpumalanga.
- Gap between Taxi industry and Municipalities during the development of new residential area, (Lack of engagement for public transport plan)
- Subsidising the Taxi industry.
- Decline on the supply to taxi operations due to job losses

The following strategies and initiatives were developed:

- Initiatives to Promote Public Transport over Private Transport
- Special Needs Public Transport Strategy.
- Development of a scholar transport strategy.
- Development of the rural transport strategy.
- Rationalisation and subsidy strategy.
- Update the NDM IPTN plan.
- Operating Licences Framework Strategy for Increasing or Decreasing Operating Licences
- Appropriate mode to address passenger and economic needs.
- An in-depth investigation, evaluation, and economic feasibility into the existing IRPTN system in Mbombela.
- Public Transport Planning guidelines must be developed that include aligning spatial & geographical developments.
- Model integration that focuses on all aspects of integration should be investigated for each district.
- Passenger Rail Services_ Support of the PRASA recovery program and alignment to the National Rail Master Plan.
- Long term financial viability and funding mechanisms for the ongoing and ever-increasing operational costs of services must be established.
- Public Transport Security
- Inter-Provincial and Cross Border Transport
- Municipal Public Transport Strategies
- Require all ITP documents to be updated in the provincial area that are outside the minimum requirements frequency needs.
- Prioritise public transport needs to meet the demands along the strategic corridors in the province.
- Support and monitor the KPI's of the district municipalities as per the DITP required public transport projects identified per municipality.
- Reduce conflicts between modes of public transport through the rationalisation and subsidy plan.
- Support the strategic corridors that are planned for in the province by the various road authorities.

The strategies and responsibilities are indicated below:

Project and Strategies description	Responsibilities				
	Local Municipality	District Municipality	Provincial	National Government	Qty
Scholar Transport Strategy	x	x	x	x	1
Special Needs Public Transport Strategy			x		1
Rural Transport Strategy			x		1
Development of the Mbombela IPTN	x	x	x	x	pendin g
Operating licence plan	x	x	x		4
Public Transport Plan	x	x	x		4
Public Transport Subsidy Strategy		x	x		1
Moloto Corridor (Rail and Road)	x		x	x	pendin g
LITP Updates	x	x			16
Cross-Border Transport Strategy			x	x	1
Ehlanzeni District Public Transport Plan		x			1
Gert Sibande District Public Transport Plan		x			1
Nkangala District RPTN Planning		x			1
Nkangala District Public Transport Plan		x			1

Mbombela CITP	x			
		Total		

Chapter 7 Non-Motorised, Learner Transport and Environmentally Sustainable Transport Strategy

This chapter outlines non-motorised transport (NMT) initiatives, including infrastructure for pedestrians, cyclists, and rural transport, along with measures to reduce transport's environmental impact.

In relation to stats SA for Mpumalanga, walking and cycling constitute almost 50% of the total trips taken during the survey period. Moreover, the trips are based on choice or because of the origin destination being a walkable distance. However, there is a large need for safe, sustainable, all weather, universally acceptable and appropriately connected NMT networks.

It is recommended for urban areas, pedestrian catchments with a radius of 1 km are identified, while the radius for rural areas is 2 km, which is a walk of less than 30 minutes in accessible terrain.

For cycling and other wheel based NMT modes (other than wheelchairs and wheelbarrows), a 30-minute journey corresponds with a 7.5 km catchment radius. When planning land use and transport projects, these catchment recommendations need to be accommodated.

Champion pilot projects should be identified in each District Municipality in the province to demonstrate the implementation of NMT measures in strategically identified leader towns in the province. These projects are labour intensive and can be used to increase skill sets and build the local economies.

Numerous strategies were identified for the successful and efficient implementation of NMT in the province, the strategies and responsibilities are indicated below.

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Provide NMT Infrastructure	x	x	x	
Provision of Sidewalks	x	x		
Provision of UA facilities	x	x		
Provision of Pedestrian crossings	x	x		
Develop NMT Plan / Strategy		x	x	
Gert Sibande DM Transport Infrastructure		x		
Gert Sibande DM Planning & Co-ordination		x		
Gert Sibande DM Transport Service Provision		x		
Gert Sibande DM Traffic Control & Safety		x		
Ehlanzeni DM Transport Infrastructure		x		
Ehlanzeni DM Planning & Co-coordination		x		
Ehlanzeni DM Transport Service Provision		x		
Ehlanzeni DM Traffic Control & Safety		x		
Ehlanzeni DM Social & Customer-based		x		
Ehlanzeni DM Environmental objectives		x		
8 NMT Projects for local municipalities in Ehlanzeni DM	x			
Nkangala DM Transport Integration	x	x		
Mbombela CITP NMT Transport Masterplan	x			
Development of Key Performance Indicators		x	x	
Data Collection and Monitoring		x	x	
Infrastructure Implementation Programme		x	x	
Road Implementation and Maintenance Programmes		x	x	
Provincial Land Transport Framework	SMEC Internal Ref. BG426			
Mpumalanga Provincial Land Transport Framework (MPLTF)	17 March 2025			
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Dedicated NMT Expanded Work Program		x	x	
Education & training		x	x	
NMT Safety Plan	x	x	x	
NMT Provision for Scholar Safety	x	x		
Walking Mater Plan		x		
Cycling Master Plan		x		
Environmentally Sustainable Transport	x	x	x	x

The environmental impact of transport related projects strategy initiatives needs to reduce the impact of transport on the environment with the following strategies:

- Promoting public transport and active mobility (walking, cycling)
- Developing electric vehicles and renewable energy sources for fuel
- Improving infrastructure efficiency to reduce traffic congestion
- Mixed use integrated land use planning
- Urban planning that prioritizes pedestrian and cycling networks
- Stricter emission standards for vehicles
- Strategy for the road to rail initiatives
- Improved materials used during contraction

Based on the above strategies the Mpumalanga DITP's, LITPs, Freight strategy and NMT plans need to be developed and updated. To achieve the strategies above, the following is required:

- Passenger Transport Environmental Initiatives
 - Promote the use of public transport rather than private vehicles to reduce congestion, less emissions, and improve accessibility.
 - Non-motorised transport (NMT) and urban densification should be encouraged to reduce GHG emissions and to improve economic opportunities and public health from walking and cycling.
 - Transition to cleaner fuels and alternative vehicles (such as electric vehicles) and provide the relevant infrastructure required to support these shifts.
 - Develop a macro simulation model that can be used to optimise road-based transport to reduce green house gases as a priority.
 - Constructed connected NMT infrastructure.
 - Plan for integrated mixed land use planning.
 - Develop a plan for micro mobility in congested metros and large cities such as Mbombela.
 - Develop an intelligent transport system for Mbombela. This can assist with improving road capacity with optimised efficiencies through the ITS planning.
- Freight Transport Environmental Initiatives
 - Mining Industry Impact:
 - Transportation of coal by road coal haulage contributes to air and noise pollution when transporting these minerals.
 - Hazardous waste transport
 - This has the potential to impact the water sources and endanger lives if not managed and planned correctly.
 - Board control
 - Major congestion at the Lebombo Boarder may be contributing to noise and air pollution.
 - Agricultural Industry Impact:
 - The agricultural supply chain contributes to soil degradation and water contamination from transportation of the agricultural products along the rural transport networks.
- The primary freight transport mitigation measures for both rail and road are:
 - A significant modal shift for freight from road to rail and provide the relevant infrastructure required to support these shifts. Resulting in a shift from petroleum-based road transport to electricity-based rail freight.
 - This is currently being planned for through the NRMP and communication of the planning will cascade from the National sector to the provincial sector.
 - Rail transport could alleviate the boarder congestion issues with road to rail shifts for freight transport to better service the Maputo port.
 - Commodities in agriculture such as citrus fruit could be transport on rail to the ports.

- Partnership with Mining and Agricultural sectors to develop environmentally sustainable transport solutions.

Chapter 8 Transport Infrastructure Strategy

The purpose of this chapter is to provide an overview of the strategies implemented by planning authorities and to highlight key provincial initiatives related to infrastructure. It includes a summary of significant planned infrastructure and facility developments, as well as transportation priorities and projects, encompassing roads, railway lines, and major intermodal facilities. Strategies and KPI's, based on the Road Asset Management System (RAMS) are provided to assist with the monitoring and performance of the road networks.

The road network forms a crucial foundation for maintaining infrastructure in Mpumalanga Province, playing a key role in supporting economic and social development. The Mpumalanga Department of Public Works, Roads, and Transport (DPWRT) faces the ongoing challenge of balancing competing priorities within a limited budget, which falls short of providing the desired levels of service.

The Mpumalanga Provincial Government owns the road infrastructure in the province, while the Mpumalanga Department of Public Works, Roads, and Transport serves as its custodian.

The Department of Public Works, Roads, and Transport (DPWRT) of the Mpumalanga Provincial Government is responsible for managing the provincial road infrastructure network. This network connects various areas within the province, as well as linking the province to other provinces, neighbouring nations, and municipal regions. The provincial road network is a crucial economic asset, not only for Mpumalanga, but also for neighbouring provinces and countries and requires careful management. Recognising the importance of effective road asset management, the DPWRT has implemented an advanced Road Asset Management System (RAMS), which provides critical data for the management and planning of the road network.

The 2023 analysis shows that the overall condition of both coal and non-coal paved provincial roads in Mpumalanga, categorised as "fair," has reached a 55% Visual Condition Index (VCI), meeting the minimum Condition Index (CI) requirement outlined in TMH 22. However, the condition of these paved roads still falls short of global standards and the recommendations from RISFSA, which suggest that having a significant portion of roads in a "poor to very poor" condition is deemed "acceptable." Currently, about 33% of paved roads are classified as "fair," indicating the need for preventative maintenance to extend their service life. The overall condition of the unpaved provincial road network, including both coal and non-coal routes, is rated as "poor," with 34% of these roads operating in poor condition.

A series of strategies were developed and the responsibilities indicated below:

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Coal Haul Road Rehabilitation Programme		x	x	
Upgrade and Rehabilitation Projects (RI-AMP)		x	x	x
RI-RAMS Work Opportunities: Expanded Public Works Programme (EPWP)	x	x	x	
Road Infrastructure Development			x	
Bridge Construction and Maintenance		x	x	
Integrated Rural Mobility and Access		x	x	
Develop and implement Performance Measures Projects			x	
Improvement Programme projects			x	
Monitoring and review projects			x	
Update RAMS			x	
Routine Maintenance Plan			x	
Rehabilitation Plan			x	
Internship Development Programme			x	
Youth Building Environment Professional Programme			x	
Community Participation Guideline			x	
Implementation of the PI-RAMS Roads Planning Projects			x	

The PI-RAMS Roads Planning Projects were summarised as follows:

- Roads Planning_ 7 projects with a budget of R162 095 000
- Design and Materials_ 22 Projects with a budget of R161 948 000
- Construction_ 74 projects with a budget of R6 450 221 000
- Maintenance_ 33 projects with a budget of R2 816 365 000
- Road Programme Management_ 2 projects with a budget of R84 000 000
- Total of 138 projects with a budget of R9 674 629 000

Chapter 9 Transport Management Strategy, including hazardous substances.

This chapter addresses the objectives and characteristics of freight transport, and the status quo of freight logistics of road freight, rail freight, air freight and pipelines. It includes reference to the Mpumalanga Freight Plan with the implementation of the Mpumalanga freight plans.

Mpumalanga is situated in the eastern part of South Africa with direct access to two neighbouring countries, and to South Africa's economic hub, the Gauteng province. Mpumalanga is neighbouring with Mozambique and Eswatini. The province experiences high volume of freight movement on the Maputo corridor linking Gauteng and Mozambique through Mpumalanga. Other corridors that contribute to the province high volume of freight are N17 and N11 corridors. The N11 route links the Mpumalanga Province and Limpopo Province, while N17 links Gauteng with Eswatini via Mpumalanga.

Currently road freight transport is the most dominant means of land freight transport in Mpumalanga, which is the same for the countries freight transport movement. According to (DoT, 2017) land freight transport is moving over 80% of the national freight logistics of all industries cargoes, road freight constitute 89.8% (1.5 billion tons p.a) of all land freight volume, whilst the rail freight constitute 10.2% (220 million tons p.a). The choice of road as a means of freight transport is influenced in some instances by the reliability of mode, time to reach destination, safety of goods, and ease of access to collection or delivery points.

The province has 8 border posts linking South Africa to Mozambique and Eswatini. Out of 8 border posts the freight movement is observed through 4, namely Mananga and Jeppe's Reef Border post which is an entry for both Eswatini and Mozambique from South Africa; Lebombo Border Post linking South Africa to Mozambique; and Oshoek Border Post linking South Africa to Eswatini.

According to the SANRAL data, the average daily truck traffic (ADTT) is 1692 trucks moving between Nelspruit and Mozambique, 886 trucks moving between Ermelo and Eswatini, and 876 trucks moving between Malelane and Eswatini and Mozambique.

The current Freight Strategy is from 2012 for the province. This is outdated and needs to be amended. Nevertheless, the 9 strategies and 39 major freight projects were identified.

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Overload Control Policy and Strategy	x	x	x	
Coal Haulage Strategy		x	x	
6 Coal Road Rehabilitation Projects			x	
Freight Strategy and Implementation Plan			x	
9 Legislative Policy Projects			x	
4 Traffic Control Projects			x	
Develop Incident Management System for Province			x	
3 HAZMAT Projects			x	
5 Rail Freight Projects			x	x
6 Road Infrastructure Projects	x	x	x	x
2 Air Projects			x	x
2 Pipeline Projects				x
2 Institutional Projects			x	
Cross-border Strategy and Implementation Plan	x	x	x	x

Road to Rail Initiatives and Strategy			x	x
Dangerous Goods Movement Strategy	x	x	x	
Implementation of Intelligent Transport Systems & Strategy	x	x	x	
Develop TDM Strategy for ITP's	x	x	x	

Chapter 10 Aviation Transport Strategy

The previous PLTF did not have a specific chapter dealing with aviation transport in Mpumalanga. Aviation plays an important role in the economy of the province, and it has been prioritised as a standalone chapter in the PLTF to provide a summary of the guidelines and policies that the Kruger Mpumalanga International Airport should align with and a summary of all the airports and airstrips in Mpumalanga is provided. A summary of steps to be followed for the Aviation Strategy is provided in chapter 10.

The purpose of aviation transport strategy aims to identify the needs of aviation transport in Mpumalanga and provide an implementation plan that will improve connectivity with regional and international routes. This development will also enhance the tourism experience in Mpumalanga either for passenger or freight aviation transportation.

In Mpumalanga, South Africa, Kruger Mpumalanga International Airport is situated 27 km northeast of Mbombela. It replaced the smaller Nelspruit Airport, and travellers visiting Kruger National Park are now served by it. Scheduled passenger flights are available to regional locations, other South African cities, Zambia(Livingstone), Mozambique(Vilanculos) and Zimbabwe(Victoria Falls).

This strategy should develop the integration between Air and Land transport in Mpumalanga. Three main focus strategies are indicated below.

1. Development of connectivity with Airports

- a. Development of dedicated freight corridors and important intermodal logistic hubs that connect road and rail freight network to the Airport for Cargo movement. Mpumalanga should develop comprehensive freight network plan for appropriate modes of transport for all commodities including identification of freight corridors and nodes.

2. Development of Integrated Transport Planning

- a. The provincial government should engage with relevant planning authorities to coordinate and align their transport planning investment with the provincial infrastructure.
- b. Collaboration can be created to investigate feasibility of specific infrastructure projects and freight transport initiatives with Mpumalanga.

3. Development of industries that can feed the aviation industry.

- a. In Mpumalanga there is comparative agriculture production and mineral production compared to other provinces. Export of raw and processed agricultural products can improve the economic growth in the province, while also supplying local provincial demand. The development of agro-processing hubs will attract industries and the establishment of a perishables hub close to KMIA to facilitate airfreight exports.

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Aviation Strategy			x	

Chapter 11 Safety and Security Strategy

The purpose of this chapter is to provide the reader with a summary of the existing rail, scholar and road traffic safety and to provide interventions required to develop a safety and security strategy for the province. The operational factors influencing road safety together with strategic challenges experienced and an implementation action plan are included in the chapter. The chapter closes with objectives that should be considered in the safety and security strategy. There are leading sectors in safety that are addressed in this chapter. Each of these issues are compounded by various safety concerns.

- Rail Safety:

- Crime_ NHTS 2022 crime contributes 2.9% to transport-related problems experienced by households in the Mpumalanga Province.
- Personal safety_ Personal safety on trains contributed 0,2% and personal safety on stations contributed 0,9% of incidents occur national wide in Mpumalanga.
- Operational incidents_ During the 2023/24 period, it was reported 352 operational incidents occurred in Mpumalanga Province
- Level Crossing Accidents_ The Level crossing occurrences resulted in 50 injuries and 6 fatalities during the 2023/24 reporting period.
- Scholar Safety_ Issues of safety of learners walking to school, cycling to school and overloading of buses is an issue.
- Operational Incidents
 - Human Factors
 - Speeding
 - Drinking and driving
 - Reckless Driving and Fatigue
 - Destructive Driving

Key Challenges

The following key current challenges pertaining to safety and security have been identified that need to frame the Provincial Land Transport Framework (PLTF) response to safety and security:

- The road accident statistics reflected a long-term declining trend, but more recently there has been an alarming increase in road fatalities, with pedestrian fatalities being unacceptably high,
- Ongoing conflict and unrest within the transport industry compromises passenger safety, particularly relating to tension around the control of routes and ranks between rival associations,
- Lack of general compliance in terms of vehicle registration, fitness and abeyance of traffic rules. Of particular concern is the continued occurrence of drunk driving and speeding which are major contributing factors to serious accidents,

Strategy Framework

Land transport safety should be viewed holistically by the Municipality in order to encompass all modes of transportation. It is imperative that the province monitor school bus route safety on an ongoing basis and foster a closer working relationship with the Department of Public Works, Roads, and Transportation. The following key objectives should be considered in the Provincial Land Transport

Framework (PLTF) to address the deficiencies in safety and security:

- Expand public transport safety initiatives in terms of a comprehensive Transport Safety Plan, encompassing the elements of compliance, enforcement, education and awareness,
- Expand on the existing provincial incident management plan in conjunction with all stakeholders to include all transport modes,
- Promote safety through developing a closer working relationship with the Department of Public Works, Roads, and Transport and undertaking joint safety projects and initiatives.

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Public Transport Safety and Security Strategy	x	x	x	
Scholar Safety Strategy	x	x	x	
Road Traffic Safety Strategy	x	x	x	

Chapter 12 Tourism Transport Strategy

The purpose of this chapter is to provide a summary of the tourism strategy, including the tourism potential and the tourism routes in the Province. The existing tourism strategy does not address access transport to tourism and it is therefore addressed in this chapter.

Adequate transportation should be provided for the growth and development of tourism. The Mpumalanga Tourism Growth Strategy document was completed in 2007 but is still in use to provide direction to tourism policy

in the province. As such, it is important to take cognisance of this document in the PLTF and to identify transport policies and transport projects that underpin the Tourism Growth Strategy as one of the economic pillars of the province.

The Tourism Growth Strategy has indicated that natural resources and scenic landscapes can only provide a basic tourism demand for the Mpumalanga Province. In order to grow the tourism industry substantially, however, requires substantial investments and dedicated management and maintenance of tourism related infrastructure from both the public and private sectors.

The most important tourism-related transport infrastructure elements in the province are the following:

- Access roads (paved and gravel) under the jurisdiction of SANRAL, the Mpumalanga Province, as well as the local authorities to all the tourist destinations in the province.
- Mbombela Stadium, access to and from the stadium with sufficient public transport infrastructure.
- Connectivity to the Kruger Mpumalanga International Airport.
- Station Infrastructure and tourism facilities along all the scenic rail lines in the province.

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Provision of well maintained access roads	x	x	x	x

Chapter 13 Funding and Budget

This chapter lists and defines all the planning and implementation projects of a provincial significance and the cost for each as well as lists and defines the budgets for the provincial departments that are responsible for the implementation of these projects. The various funding sources are described in this chapter as well.

In general, funding sources for the transportation sector in South Africa are severely limited especially in the provincial sphere of government (and its constituent municipalities). Provincial governments receive annual grant transfers from the national treasury. In terms of existing legislation provinces have very limited opportunities to raise funds from other sources.

Transport is the lifeline of economic activity, and the efficient and effective movement of people and goods is essential for the economy to grow. There is enormous pressure on the fiscus from all sectors, and transport is competing for funds against all other sectors. This section of the report addressing the various funding options available to the province in the quest to fund transport related activities.

- Legal background to transport funding
 - NLTA Act 5 of 2009
 - land transport Amendment Act 23 of 2023 clause 27
- Funding sources
 - Internal Public Sources: Local Taxes etc
 - External Public Funding sources: DoRA
 - Equitable Share
 - Conditional Grants: MIG, USDG, NDPG, PTNG, ICDG
 - Provincial Taxes
 - User Charges
 - Private Funding
 - Value Capturing
 - Incentive Zoning
 - Inclusionary Zoning
 - Joint development
 - Development charges
 - PPP
 - Loans
 - Other funding:
 - Economic opportunities at public transport facilities
 - User charges

- Road Pricing
- Vehicle License Fees
- Congestion Charging
- Parking fees
- Road Tolling
- High Occupancy Toll (HOT)
- Cordon or area tolls
- Weight-Distance and Other Distance Based Charging Mechanisms.
- Traffic Enforcement and Fines.
- DFIS's funding agencies: DBSA, IDC, Infrastructure South Africa, African Development Bank, International Finance Corporation
- Needs analysis
 - The principal objective of this report was to analyse the 13 837 km of provincial roads under the jurisdiction of the Department of Public Works, Roads, and Transport to determine the impact of the funding on the predicted performance of these roads. Coal and non-coal haul roads were analysed separately because these two sub-networks of roads have different specified funding amounts from the budgets.
- Annual Report Results
 - Transport Operations spent 99,7% of its budget and in the process achieved 5 of the 6 (83%) planned targets at year end.
 - The Expanded Public Work Program (EPWP) continued to create the much-needed work and training opportunities for the poor, unemployed, youth and women. The Mpumalanga Province created a total of 35 027 work opportunities in the past year and the main beneficiaries of these jobs were 22 661 women, 15 576 youth and 298 people with disabilities.
 - The Department received R1,625,310 (2022/2023) of grant funding and managed to spend R1,621,309 (99,8%) by the end of the financial year.
- Financial Performance Plans

An efficient public transport system and service is not only important to the economic growth of the province, but it is also important to ensure safety, accessibility, reliability, and affordability. As such, the Department supports these priorities through various public transport operations which include subsidisation of almost 400 000 commuters daily. In addition, approximately 63 600 learners are provided with scholar transport thus giving them access to quality education. The Department is also expected to facilitate and ensure compliance with public transport laws and regulations when the above-mentioned services are rendered hence the inclusion of road safety and licensing targets.

Chapter 14 Monitoring

This chapter is to provide strategies and a list of KPIs to monitor public transport and intra-provincial transport as well as to report on how the KPIs on the public transport and intra-provincial transport have been met concerning the NLTSF and previous year's PLTF.

The National Land Transport Strategic Framework (2023 to 2028) and NATMAP 2050 provide two sets of Key Performance Areas and Key Performance Indicators that are aligned with national transport policy. KPI's were developed from the NATMAP 2050, the MP PLTF 2013-2018, the RI-RAMS and from the Gazetted minimum requirements for ITP 2016. The source from where the KPI was obtained is identified in the table below.

Transport Item	KPI	Measurement	Target	Sources
Integrated Transport Planning	Average travel time by all modes	Travel time in minutes	< hour (urban) / < 30min (rural)	NATMAP 2050
	Traffic Network Performance	Average peak-period journey speed (km/h), traffic flow rate, queue lengths, relative to a target journey speed (km/hr)	LOS D in peak hour traffic (Urban) LOS B in peak hour traffic (Rural)	NATMAP 2050
	Quality walking links to main public transport nodes in 20min or 1km radius	Kms	Kms of NMT network created	NATMAP 2050

	Increase commuting to work trips by public transport and walking	%	1% of cycling as a mode share by 2029	NATMAP 2050
	Full cycle lane within a radius of 5km from main PT nodes	Kms	Kms of NMT network created	NATMAP 2050
	Scholar Transport	%	80% of scholars with access to public transport by 2029	MP PLTF 2013-2018
	Average age of subsidised bus and commuter rail coach fleet	No of vehicles	No vehicle more than 15 years is permitted unless rebuilt or rehabilitated And No vehicle with chassis of more than 27 years even if rebuilt or rehabilitated.	MP PLTF 2013-2018
	Integrated Transport Plans	Number of LM, DM completed ITP's	All LITP, DITP and CITP completed for the planning cycle of 2024-2029	Minimum Requirements
	Transport Register and Public Transport Plans	Number of LM, DM completed TR's and PTP	All LM and DM TR and PTP completed in the planning cycle of 2024-2029	Minimum Requirements
Public Transport	Increase in proportion of households in rural areas within about 2km of a public transport service	% of Households	40% by 2029	NATMAP 2050
	Proportion of households in urban areas within 1km walking distance from a public transport service	% of Households	85% by 2029	NATMAP 2050
	Implementation of approved plans and initiatives (e.g. IRPTN's)	% increase in the use of public transport	3% increase in passenger trips per mode per annual by 2029	NATMAP 2050
	Increase commuting to work trips by public transport	% Modal share of road-based travel (mode split)	70% of road based mode share by 2029	NATMAP 2050
	Existing service pattern	Frequency	Every 10 min during peak hour on trunk roads and rail and every 20 - 30 min during off-peak	NATMAP 2050
	Reliability of scheduled services	Frequency	Every 5 min during peak hour on trunk roads and rail and every 10 - 30 min during off-peak	NATMAP 2050
	Percentage of households spending more than 10% of disposable income on public transport	Number of households	No Households to spend more than 10% of disposable income on Public Transport by 2029	MP PLTF 2013-2018
	Subsidy and formal contracts with the percentage of bus services operating in terms of tendered or negotiated contracts	%	100% by 2029	MP PLTF 2013-2018
	Percentage of mini-bus taxi fleet recapitalised	Number of vehicles older than 15 years operating or entering the market	No vehicles older than 15 years operating or entering the market by 2029	MP PLTF 2013-2018
Traffic Safety	Reduction in the number of crashes expressed as the number of people per 100 million vehicle kilometres	Total fatalities and injuries per 100,000km	50% reduction in the number of people killed or seriously injured in road accidents by 2029	NATMAP 2050
	Number of road fatalities	Number of fatalities	10% reduction in fatalities year on year	MP PLTF 2013-2018
	Number of road traffic pedestrian fatalities	Number of fatalities	15% reduction in fatalities year on year	MP PLTF 2013-2018

Environment	Greenhouse gas emissions from all road based transport	Total GHG Emission (Mt)	Reduce GHG emissions by 5% from current levels by 2029	NATMAP 2050
	Energy efficiency	% Improvement	12% by 2029	NATMAP 2050
	Environmental education	Number of environmental awareness activities conducted	8 per annum (linked to environmental calendar days)	NATMAP 2050
	Air quality	Percentage of compliance with National Annual Ambient Air Quality Standards to improve air quality	100% compliance by 2030	NATMAP 2050
Freight Transport	Percentage of overloaded trucks on road network	%	Less than 5% of trucks overloaded	MP PLTF 2013-2018
	Improve heavy goods vehicle safety performance; roadworthiness; and self-regulation	%	% increase in RTMS certification and compliance	NATMAP 2050
Rural Transport	Improve rural access index to rural population having access to some form of transport	Transport accessibility	Improve rural accessibility to 50% by 2029	NATMAP 2050
	Rural access improved to eliminate constraints on the time which all children have to participate in education	%	90% of schools with reliable access by 2029	NATMAP 2050
	Percentage of people in rural areas living 2km of access to regular public transport	%	Minimum of 80% of people in rural areas by 2029	MP PLTF 2013-2018
Road Infrastructure	The rate of increase in the average network (VCI)	%	Increase above 50% (TMH 9)	RI-RAMS 2024/2025
	The rate of increase in reseal condition index (RCI)	%	Increase above 60% (TMH9)	RI-RAMS 2024/2025
	The rate of increase in average Visual Gravel Index (VGI)	%	Increase above 33% (TMH 12)	RI-RAMS 2024/2025
	The average road user cost	R	Decrease to below R10.85 average road user cost	RI-RAMS 2024/2025
	Road projects completed on time and in budget	No.	Complete 100% of projects in time and budget	RI-RAMS 2024/2025

However, setting KPIs without measuring them will not achieve the transport development results that Mpumalanga Province wants.

It is thus necessary to set up a Transport Monitoring Section that will on a continuous basis measure the transport performance indexes as it was detail above. The monitoring section should best be situated within the Public Transport Directorate as many of these targets are located in this directorate.

Chapter 15 Coordinating Structures, Measures, and Conflict Resolution

The purpose of this chapter is to provide the province with the institutional roles and responsibilities as well as the institutional structures to coordinate the provincial government. A section is included in this report to indicate who is responsible for the different classes of roads passing through the province connecting various land uses and areas.

Focusing on policy and strategic planning, including substantive regulation, and reducing the government's direct involvement in operations and the provision of infrastructure, as indicated by Section 156(4) of the constitution,

the primary responsibility for the execution of land transport functions rests with the municipal sphere of government, which includes transport authorities that are established to undertake municipal transport functions.

All spheres of government have some responsibility for the three key elements of the road transport system:

- Road infrastructure
- Public transport
- Traffic management

Public transport is a concurrent schedule 4A function between the national and provincial spheres. Municipal transport is a concurrent schedule 4B function falling in the local government sphere. Provincial roads and traffic are an exclusive schedule 5A provincial function. Municipal roads, traffic and parking are exclusive Schedule 5B municipal functions.

In summary, legal background is explicit, co-ordinating structures are to be in place to facilitate transportation planning:

- Between municipalities across municipal borders.
- Between the different spheres of government, namely the municipalities, district municipalities, the provincial Dept of Public Works, Roads and Transport and the national Department of Transport.
- Between the spheres of government and the private sector role players in the transportation industry.

In the table below a set of specific objectives are provided, which need to be implemented to facilitate the co-ordinating structures that are required for the Mpumalanga Province:

Goal	Policy Objectives and Strategic Pathways
Strengthening & improving institutional systems & governance responsiveness	<ul style="list-style-type: none"> • Position transport forums as an IDP working group. • Broaden the terms of reference of transport forums to include all modes. • Re-draw the terms of reference of transport forums to ensure sustained interest from stakeholders. • Provide mechanisms to assist municipalities that have no capacity to carry out their planning responsibilities. • Expand the terms of reference of the provincial freight forum to include other modes & ensure its efficiency as an integrative platform. • Conduct studies to advise on the advisability to establish a PMU and Monitoring Section within the DPWRT.
Capacity Building & Training	<ul style="list-style-type: none"> • Conduct district road shows on transport planning & management. • Request DOT to second transport officials to assist in capacity building in the province. • Train all district officials on the NLTA and transport amendment act.

Furthermore, each chapter that was developed for the PLTF outlines a responsibilities section that indicates the government organisation/s that is responsible for the various strategies. These can be used in developing the strategies to ensure that the Mpumalanga province transport initiatives, strategies and plans can be implemented.

1 Chapter 1: Introduction, Process, and Consultation

1.1 Introduction

In terms of section 35 of the National Land Transport Act (Act No. 5 of 2009) (NLTA, 2009), each Provincial Government must prepare a Provincial Land Transport Framework (PLTF) covering five financial years, which must be published in the Provincial Gazette. In the minimum requirements for the compilation of a PLTF the requirements for this Chapter are defined as follows:

- a) *This chapter must outline the process followed in preparing the Provincial Land Transport Framework including the consultation process, with reference to public meetings held, documents and drafts published for comment.*
- b) *It must also indicate the status of the document, i.e. the dates on which it was approved by the MEC and Minister, or, as the case may be, when it will be submitted for such approval.*

The purpose of this chapter is to provide the reader with the process that was followed to develop the Mpumalanga PLTF. This chapter provides a background of the various municipalities in the province, as well as its geographical location. The chapters to include in a PLTF are also summarised in the Introduction Chapter.

1.2 Purpose

PLTF is a strategic framework that gives the agenda, principles, and standards for all transport and land-use related in the province, it needs to be strong to facilitate its adoption and use by planning authorities (district and Local Municipalities). The PLTF must, therefore, seek to craft a meaningful framework that strategically influences the spatial structuring of the province, as well as:

- Providing a firm foundation for supporting the Provincial Growth and Development Vision.
- Function as a service delivery tool, as opposed to an information depository and archive.
- Operate as a tool that will guide short and long-term sustainable transport interventions.

The MPLTF, therefore intends to:

- It gives the objectives and policies that will provide direction on the provincial transport network.
- Implement national transport planning objectives and policies that form part of the provincial transport planning objectives.
- Assist in coordinating and integrating transport in the province.
- Serves as the basis for the preparation of Integrated Transport Plans (ITPs) AND Public Transport Plans (PTPs) in the province.

The 2025 to 2029 MPLTF document is not only for transport policy and legislation but will also deal with other selected transport focus areas, including a description of related strategies adopted on a Mpumalanga basis. The departments responsible for transport functions in the province and municipal authorities, need to further the strategies and development of respective transport plans containing a description of short- and medium-term actions. Detailed planning and consultation will then be required when implementing such proposals and projects flowing from the PLTF and related municipal plans.

1.3 Background

According to (Alexander, 2024), Mpumalanga Province is the second-smallest province after Gauteng of the nine provinces of South Africa which covers 6.3% of South Africa's area. Despite the size of the province, Mpumalanga contributes critically to the country's economy since it is rich in coal mining, power generation, and agricultural activities. The province is in the north-eastern part of South Africa bounded by Swaziland and Mozambique on the east. It borders South African provinces, such as: Limpopo, KwaZulu-Natal, Gauteng, and Free State.

The province consists of three District Municipalities (Ehlanzeni, Gert Sibande, and Nkangala), which are further subdivided into Seventeen Local Municipalities as shown in Figure 1-1. Mbombela is the capital of the province,

which is the primary gateway to the Lowveld and the Kruger National Park. The province is known for diverse economic sectors including mining, manufacturing, and services, as well as tourism and Agri-processing. The province is well known for its lowveld region that offers the tourist a unique African experience. Wildlife reserves, provincial and national, have been created to converse a large part of the eastern extremes of the province against the Mozambique border.

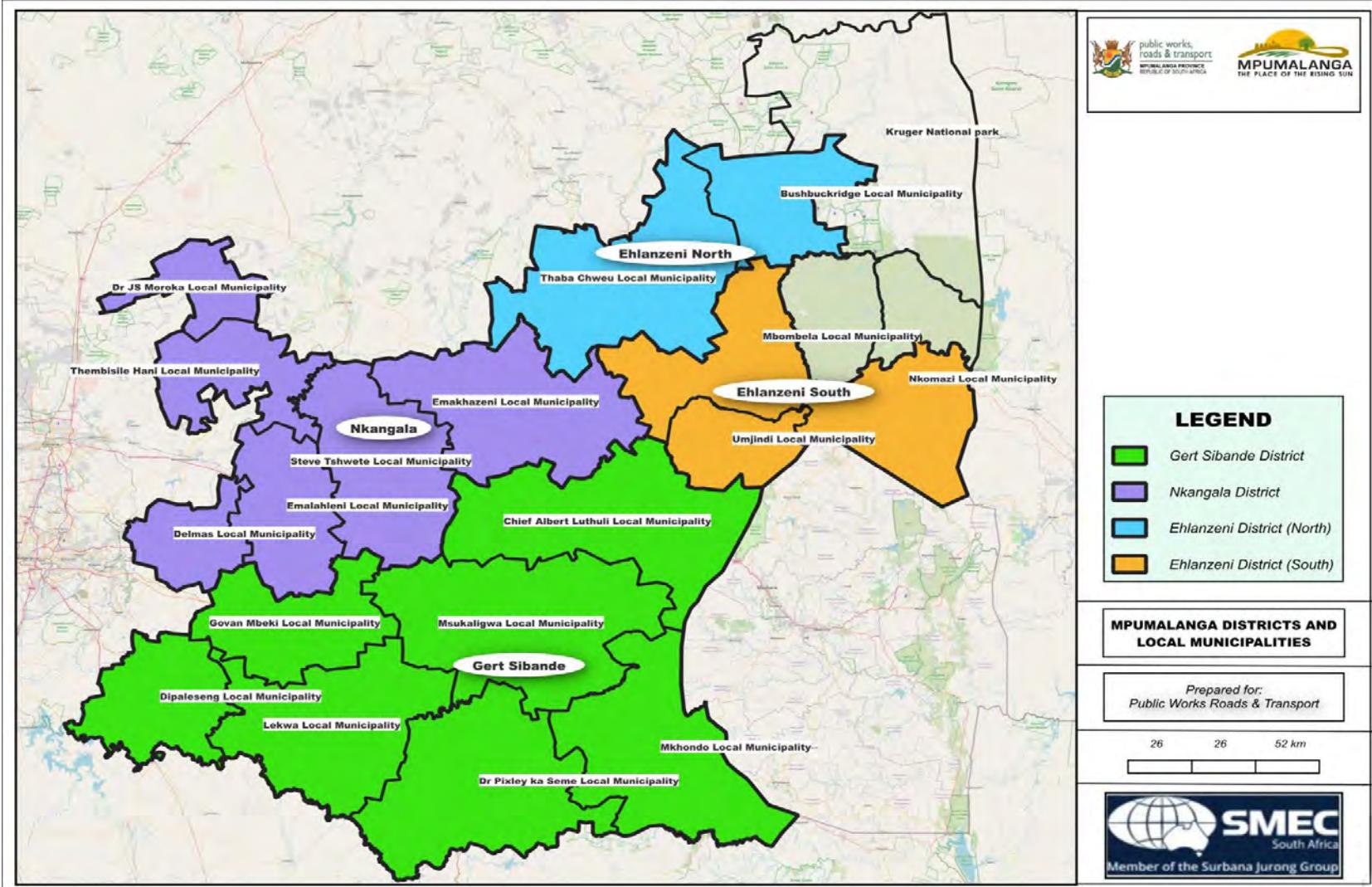


Figure 1-1: Mpumalanga Province District and Local Municipalities

1.4 Process followed in compiling the PLTF.

The 2012/13 – 2017/18 PLTF update was done according to the national regulations relating to the minimum requirements for preparation of the PLTF, as contained in Government Gazette 2283, dated 22 April 2014.

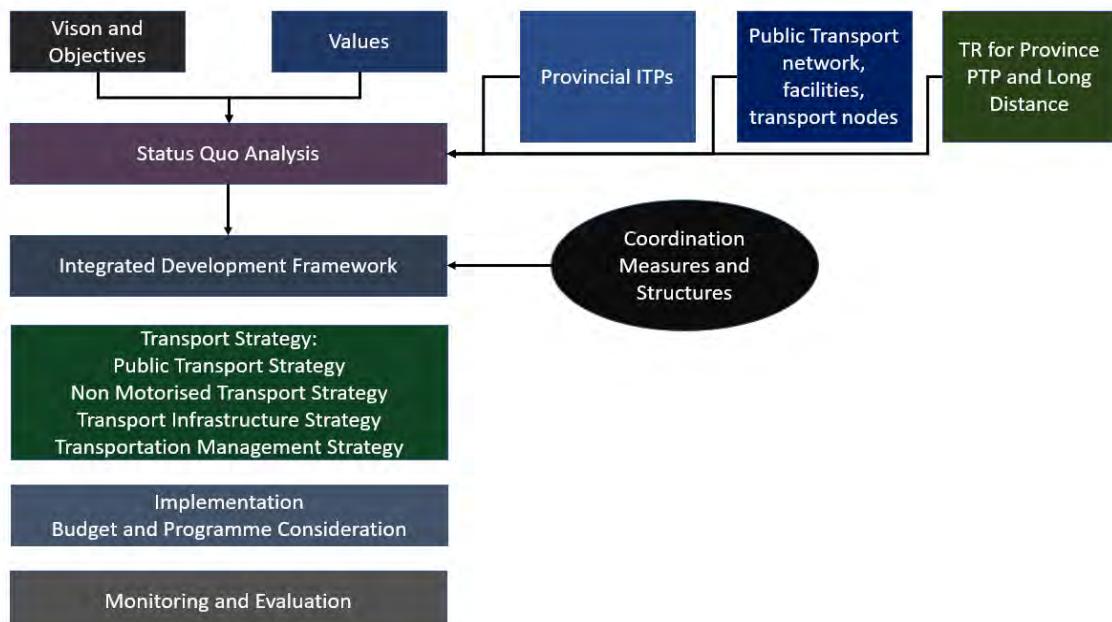


Figure 1-2; Process of Undertaking a PLTF

1.5 Outline of the PLTF

Per the Minimum requirements of the National Land Transport Act (Act No. 5 of 2009) (NLTA), the following chapters shown in Table 1-1 are required for the development of a PLTF.

Table 1-1: Outline of the Chapters

Chapter 1	Introduction
Chapter 2	Transport Vision, Policy and Objectives
Chapter 3	Status Quo of Transport in the province
Chapter 4	Integrated Development Framework
Chapter 5	Integrated Transport Plans
Chapter 6	Public Transport Strategy
Chapter 7	Rural and Non-motorised Transport Strategy
Chapter 8	Transport infrastructure strategy
Chapter 9	Transport Management Strategy, including hazardous substances
Chapter 10	Land and Aviation Transport Strategy
Chapter 11	Safety and Security Strategy
Chapter 12	Tourism Transport Strategy
Chapter 13	Funding and Budget
Chapter 14	Monitoring
Chapter 15	Co-ordination Structures

2 Chapter 2: Transport Vision, Policy, and Objective

2.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for this Chapter are defined as follows:

- a) *This chapter must start with an interpretation of the National Land Transport Strategic Framework as it relates to the province, with reference to specific needs and challenges.*
- b) *It must deal with provincial land transport policy published in terms of section 9(1) of the Act and attach that policy as an annexure or provide details of where it may be obtained. If such policy has not been published, but there is a provincial white paper or green paper, the white paper or green paper must be attached or details provided of where it can be obtained.*
- c) *Where there is no published policy, white paper or green paper, this chapter must provide policy guidance for at least the promotion, management, regulation and control of public transport in the province.*
- d) *It must highlight actual or potential areas of conflict between national and provincial land transport policy.*
- e) *It must formulate specific objectives relating to the overall vision and key priorities of the province, which must be acceptable, measurable, understandable and achievable.*

The purpose of this chapter is to interpret the National Land Transport Strategic Framework (NLTSF), as it relates to the transport policies of Mpumalanga Province. Various provincial programmes applicable to the PLTF are summarised in this chapter. It will explore the policies and directions at both national and provincial levels and then highlight possible conflict areas. The objective is to define the overall vision and key priorities of the Mpumalanga Province.

2.2 Interpretation of the National Land Transport Strategic Framework

The NLTSF is primarily based on Clause 21 of the National Land Transport Act (NLTA) requirements. It guides land transport planning, including public transport, rural transport, and safety matters. The NLTSF required by section 21(3) of the National Land Transport Act (NLTA) that "NLTSF must set out national policy regarding land transport matters to ensure uniformity by guiding developments across the country".

The guiding policies include:

- Public transport has to be prioritised over private transport.
- The shift in policy from a supply-driven to a demand-driven land transport system.
- The taxi associations must be formalized and have registered members of the association. Operation licenses and permits need to be on the route-based condition.
- Provincial and municipal bus operators have to restructure and provision of subsidised transport services must be in terms of open tenders.
- The operation of freight transport nationwide needs to have balanced freight transport and route sharing.
- Promotion of the formalized institutions that is responsible for the operation of land transport.
- It is essential to integrate land transport functions for land use and economic planning development.
- Strategic rail capability in the national government has to be developed and a rail safety regulator must be appointed.
- The implementation of rural access planning and decision-support systems.
- The promotion of a more balanced cooperative and coordinated flow of freight and passengers through cross-border transport by public and private sectors.
- The effective law enforcement instruments must be put in place.
- Tourism strategies for development purposes should be considered for land transport planning, transport infrastructure and transport operations.
- Promotion of safe and least harmful environmental impact strategies should be considered on land transport.
- Cost-effective, quality service, satisfactory allocation and utilisation of resources, and competitive market of the public transport services must be available to provide affordable transportation to the commuters in the province and municipalities.

- The consideration of passengers with special needs in the planning and provision of transport infrastructure.

2.3 Provincial Land Transport Policy

The Provincial Land Transport Framework should be aligned with existing legislative frameworks and be contextually responsive to the:

- White Paper on Transport – provides guidelines for the implementation of transport functions;
- National Land Transport Strategic Framework – sets out the national policy framework concerning land transport matters to bring about uniformity;
- National Transport Master Plan 2050 (NATMAP 2050) – provides for the coordination of planning with public and private sectors in respect to envisaged long-term plans; and
- Expanded Public Works Programme – the Guidelines for the Implementation of Labour-Intensive Infrastructure Projects under the EPWP.

Planned policy initiatives include:

In terms of the National Land Transport Act 5 of 2009, Operating Licensing Boards are to be dissolved and replaced by Provincial Regulatory Entities, as well as Municipal Regulatory Entities to perform the function initially performed by the Operating Licensing Boards.

Currently, the Province of Mpumalanga does not have an **official White Paper on Transport Policy**. The Department of Transport (DOT) published a White Paper on National Transport Policy in 1996, with the most recent revision gazetted in May 2022, outlining the vision for transport in South Africa as follows:

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

The broad objectives as delineated in the White Paper are:

- To support the goals of the prevailing, overarching plan for national development to meet the basic accessibility needs of the residents of South Africa, grow the economy, develop and protect human resources, and involve stakeholders in key transport-related decision-making.
- To enable customers requiring transport for people or goods to access the transport system in ways that best meet their chosen criteria.
- To improve the safety, security, reliability, quality and speed of transporting goods and people.
- To improve South Africa's competitiveness and that of its transport infrastructure and operations through greater effectiveness and efficiency to better meet the needs of different customer groups, both locally and globally.
- To invest in infrastructure or transport systems in ways that satisfy social, economic or strategic investment criteria.
- To achieve the above objectives in a manner that is economically and environmentally sustainable and minimises negative side effects.

The Mpumalanga province supports the transport vision and goals contained in DOT's White Paper on National Transport Policy of 1996, and the revised paper gazetted in May 2022.

2.4 Strategic Intent for Transport

2.4.1 Vision Statement

The vision statement of the Department of Public Works Roads and Transport is:

"An integrated transport system and infrastructure that promotes socio-economic development."

2.4.2 Mission Statement

The mission statement of the Department of Public Works Roads and Transport is:

"To provide an integrated, reliable and cost-effective transport system that meets the development needs of the province. To deliver infrastructure that promotes sustainable economic development and job creation."

2.4.3 Values

The values of the Department of Public Works Roads and Transport are:

- Accountability – to listen, understand and deliver for all of our customers, whether they are the community, industry or client departments.
- Integrity – to be committed to professionalism, confidentiality, ethical conduct, transparency and fairness.
- Innovation – to find new ways to deliver highly effective, fit-for-purpose and cost-efficient services.
- Excellence – to promote a culture and ethos which are characteristics that the Department delivers on its mandate(s).
- Teamwork – our people are hard-working and dedicated to ensure that the Department deliver on its mandate(s).

2.5 Department of Public Works, Roads and Infrastructure

To fulfil its mandate, the department implemented five programs: Administration, Public Works Infrastructure, Transport Infrastructure, Transport Operations, and the Community-Based Program, each with specific strategic objectives. Three of these programs are directly associated with the PLTF, while the remaining two relate to Administration and Public Works Infrastructure.

The strategic goals and objectives of the programs linked to the PLTF are outlined in the table below. Each program includes several sub-programs that enable the Department to carry out its implementation. The three programs (Programs 3, 4, and 5), which directly impact the PLTF, along with their respective sub-programs, are discussed in greater detail in the following section.

Table 2-1: Department of Public Works, Roads and Infrastructure – Strategic transport goals

Programme	Strategic Goal	Outcomes/ Objective
Transport Infrastructure	Enhance accessibility and ensure the safe, affordable movement of people, goods, and services by delivering and maintaining sustainable, integrated, and environmentally sensitive transport infrastructure that supports social empowerment and economic growth	An efficient, competitive, and responsive economic infrastructure network.
Transport Operation	Improve community mobility, especially for those with limited or no access, by planning, regulating, and facilitating integrated land transport services	An efficient, competitive and responsive economic infrastructure network.
Community-Based Programmes	Oversee the implementation of strategies and initiatives that promote the development and empowerment of communities and contractors.	More decent jobs created, and sustained, with youth, women and persons with disabilities prioritised

2.5.1 Programme 3: Transport Infrastructure

The purpose of the Programme is to promote accessibility and the safe, affordable movement of people, goods and services through the delivery and maintenance of transport infrastructure that is sustainable, integrated and environmentally sensitive, and which supports and facilitates social empowerment and economic growth.

The following sub-programmes form part of the Transport Infrastructure Programme:

- Programme Management Unit;
- Road Infrastructure Planning;
- Road Design and materials;

- Road Construction; and
- Road Maintenance.

2.5.2 Programme 4: Transport Operation

The purpose of the Programme is to plan, regulate and facilitate the provision of integrated land transport services through coordination and cooperation with national planning authorities, CBOs, NGOs and the private sector in order to enhance the mobility of all communities particularly those currently without or with limited access.

The following sub-programmes form part of the Transport Infrastructure Programme:

- Programme Support;
- Public Transport Service;
- Transport Safety and Compliance;
- Transport Systems; and
- Infrastructure Operations.

2.5.3 Programme 5: Community-Based Programme

The purpose of the Programme is to manage the implementation of programmes and strategies that lead to the development and empowerment of communities and contractors. This includes the provincial management and coordination of the Expanded Public Works Programme (EPWP)

The following sub-programmes form part of the Transport Infrastructure Programme:

- Programme Support;
- Community Development;
- Innovation and Empowerment; and
- EPWP Coordination and Monitoring.

2.6 Department of Community Safety, Security and Liaison

The strategic goals and objectives of the transport-related programmes under the Department of Community Safety, Security, and Liaison are outlined in the table below.

Each programme includes several sub-programmes through which the department carries out its implementation. The two specific programmes (programmes 3 and 4) that directly impact the PLTF, along with their respective sub-programmes, are further detailed in the following section:

Table 2-2: Department of Public Works, Roads and Infrastructure Strategic Objectives by Programme

Programme	Strategic Goal	Outcomes/ Objective
3. Transport Regulation	To ensure road safety by regulating traffic, controlling vehicle overloading, implementing road safety campaigns, and managing the registration and licensing of vehicles and drivers.	Enhance compliance with traffic rules among all road users by implementing road safety education and awareness programs. Decrease the number of fatal road crashes by 3% annually, through the provision of registration and licensing services at all traffic institutions and increased traffic law enforcement.
4. Security Management	Enhance compliance with traffic rules among all road users by implementing road safety education and awareness programs.	Secured and protected government properties and personnel

2.6.1 Programme 2: Transport Regulation

The purpose of Transport Regulation is to ensure a safe road environment through the regulation of traffic on public roads, overload control, implementation of road safety campaigns, as well as registration and licensing of vehicles and drivers.

The Programme consist of six sub-programmes or directorates:

- Programme Support;
- Safety Engineering;
- Traffic Law Enforcement;
- Road Safety Education;
- Transport Administration and Licencing; and
- Overload Control.

2.6.2 Programme 4: Security Management

The purpose of the programme is to coordinate the provision of security services in the province.

2.7 Conflicts between National and Provincial Land Transport Policy

Given that the provincial vision, mission, programs, and strategic objectives were developed in alignment with national policies, no potential conflicts have been identified between the provincial and national policy.

However, there is a major concern that arose during the stakeholder engagements where the taxi industry in Mpumalanga has raised issues around the subsidisation policy and the difference between the bus industry and the minibus taxi industry (MBT).

Currently the MBT industry is not subsidised while some of the provincial bus contracts are subsidised. This is creating major conflict in the province. Formerly, the bus contracts were managed by the NDoT and operators received a subsidy per multi-journey ticket issued. The amount was based on their cost per passenger km with a reasonable profit rate. Fares were set by the NDoT so as to be affordable to users and the difference made up by subsidies.

In the early 1990s the South African government made a decision to move to a tendered system for new contracts where the operator would be paid a tendered rate per km. In 1997 the function was transferred to the provinces and all existing contracts were to be converted to tendered contracts. However, this largely did not happen.

In 2000 the NLTTA provided for negotiated contracts in certain circumstances, and for tendered contracts. The existing contracts were to be converted to tendered contracts, but that largely did not happen as planned.

The NLTA of 2009 also provides for negotiated contracts, once only, where a municipality is integrating its PT services, to include taxi and other small operators in the contracting system and where parastatal bus companies are being restructured. Apart from that, services must be put out to tender. The DoT has published *pro forma* tender and contract documents that must be used as a basis. Subsidies are based on a rate per km.

Over the years the taxi industry has agitated for subsidies and pointed out that it is unfair that the bus industry is subsidised, and they are not. This is also true in Mpumalanga. NDoT has developed a draft position paper on this in 2006, but to date there are no subsidies for MBTs as such, except for the Taxi Recap Programme.

At present the only type of subsidy for MBT is in the form of the Taxi Recapitalisation Programme. Operators can submit old vehicles for scrapping and receive a scrapping allowance with which they can either buy a new vehicle or exit the industry.

The subsidy debate has centred around whether the operator or the user should be subsidised. The general preference is for a user side subsidy system where the user can for example purchase a subsidised ticket which can be used on any mode – bus, taxi or rail. However, such a system has not been implemented in South Africa.

Nevertheless, the National Public Transport Subsidy Policy was published for comment and is still not finalised. The draft policy provides the following, by way of example:

- Evaluate possible additional capital subsidy funding of the minibus-taxi operators through increased budget for “scrapping” allowance through the Taxi Recapitalisation Programme on the per application basis. The additional capital funding would assist the operators through reduced finance cost of the rolling stock and overall operating cost of the service. The intervention could be implemented as a mechanism for the fare management of the minibus taxi services or as an improved profitability of the operations through the reduction of the operating costs of the service.
- Evaluate appropriate technology solutions to introduce a cashless and automatic fare collection (AFC) for the minibus-taxi services whilst appreciating the prevailing business model of the industry. The appropriate AFC system solution could be used as the basis for an ultimate integrated transport system solution and could also be considered as additional capital subsidy funding of the minibus-taxi operators.
- Providing assistance to the MBT industry to consolidate its thousands of individual operators into companies operating fleets of taxis on behalf of shareholders and in so doing contract with government.

It does not provide for subsidies for MBTs as such, unless they form companies and tender for subsidised service contracts or are involved in those contracts in some other way, e.g. as feeder services. There seems to be a need to have this resolute as it is creating tension through South Africa as well as in Mpumalanga. However, for the purposes of this PLTF, there is currently no formal subsidies for the MBT industry.

2.8 Legislative Mandates and Planning Authorities

2.8.1 Legislative Mandates

Legislative mandates include:

- **National Land Transport Act 5 of 2009/ Act 23 of 2023** provides further the process of transformation and restructuring of the National land transport system initiated by the National Land Transport Transition Act, 2000 (Act No. 22 of 2000) and provides for matters connected therewith.
- **Road Safety Act, 1972 (Act 9 of 1972)** Promotes and regulates road safety.
- **National Road Traffic Act, 1996 (Act No. 93 of 1996)** provides for road traffic matters, which shall apply uniformly throughout the Republic for matters connected therewith.
- **Road Transportation Act of 1977** regulates all matters pertaining to road transportation for both passenger and freight transport.
- **Cross-Border Road Transport Act, 1994 (Act 4 of 1998)** provides for co-operative and co-ordinated provision of advice, regulation, facilitation and law enforcement in respect of cross-border road transport by the public and the private sectors; to that end, to provide for the establishment of the Cross-Border Road Transport Agency to repeal certain laws and to provide for matter connected therewith.
- **Mpumalanga Road Act, (Act 1 of 2008)** provides for the establishment, transformation, restructuring and control of the Mpumalanga Provincial Road network to develop and implement Provincial Road policy and standards.
- **Mpumalanga Road Traffic Act, (Act 4 of 1998)** consolidates and amends the provisions relating to road traffic and provides for matters connected therewith.
- **Road Transportation Act of 1977** regulates all matters pertaining to road transportation for both passenger and freight transport.

2.8.2 Policy Mandates

Policy mandates include:

- *White Paper on Transport* provides the guidelines for the implementation of transport functions.
- *National Development Plan (NDP 2030)* provides a broad strategic framework to guide key government choices and actions and focuses on the critical capabilities needed to transform the economy and society.
- *Draft National Transport Master Plan 2050* offers a strategic vision and plan that links top NDP objectives to actionable steps and intermediate outcomes. In the main, it focuses on critical network infrastructure sectors of: energy, freight transport, water, and digital communications.
- *National Land Transport Strategic Framework* sets out the national policy framework with respect to land transport matters in order to bring about uniformity.
- *Expanded Public Works Programme (EPWP) Policy* provides guidelines and principles of carrying out labour intensive work.

- The Province of Mpumalanga currently lacks an official White Paper on Transport Policy. The Department of Transport (DOT) published a White Paper on National Transport Policy in 1996, which was revised in 2021.

2.8.3 Planned Policy Initiatives

Planned policy initiatives include:

In terms of the NLTA, Operating Licensing Boards are to be dissolved and replaced by Provincial Regulatory Entities (PREs), as well as Municipal Regulatory Entities (MREs) to perform the function initially performed by the Operating Licensing Boards (OLBs).

2.8.4 Responsibilities of Authorities

In South Africa, a hierarchy of planning authorities exists, encompassing the national, provincial, and municipal governments, each responsible for strategic planning and substantive regulation. According to Section 156(4) of the Constitution, the national government's direct involvement in operations and infrastructure provision is limited, placing the primary responsibility for executing land transport functions on the municipal sphere of government. This includes transport authorities established to manage municipal transport functions. As outlined in the National Land Transport Act (NLTA) of 2009, the roles of the three spheres of government in relation to land transport are as follows:

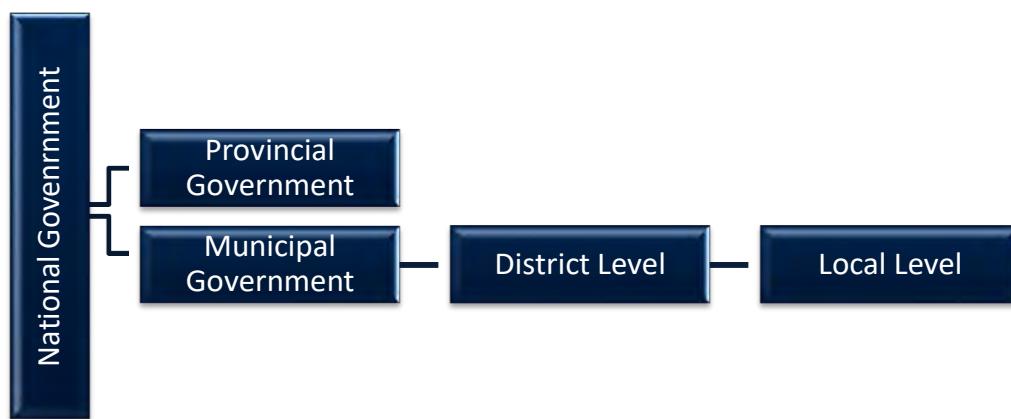


Figure 2-1: Spheres of government

The national sphere of government is responsible for the following:

- Policy and strategy formulation.
- Overall strategic transport planning and coordination in the national sphere and preparing the NLTSF in terms of Section 43.
- Co-ordination between provinces and addressing arrangements between the three spheres of government and public entities.
- Allocating functions to the most appropriate sphere of government by promoting legislation and promoting or concluding agreements, as appropriate.
- Liaising with other government departments in the national sphere with portfolios that impact transport issues and bring together key players.
- Assisting provinces that lack capacity or resources and seeing that gaps left by them are filled.
- Intervening where provinces fail to perform their functions, subject to section 100 of the Constitution.
- Co-ordinating transport relations between the republic and other countries and implementing international agreements.
- Performing the other functions of the Minister in terms of the Act.

The provincial sphere of government is responsible for the following:

- More detailed provincial policy and strategy formulation.
- More detailed transport planning and coordination in the provincial sphere and preparing the PLTF in terms of Section 44.
- Co-ordinate between municipalities and transport authorities to promote provincial legislation and municipal by-laws, and promote or conclude agreements, as appropriate, in the provincial sphere.
- Liaise with other government departments in the provincial sphere with portfolios that impact transport issues and bring together key players.
- Assist transport authorities and municipalities that lack capacity or resources and to see that gaps left by those authorities are filled, subject to Section 139 of the constitution.
- Perform the other functions of the MEC in terms of this act.

The municipal sphere of government is tasked with managing municipal transportation functions, including public transport in their jurisdiction, and holds primary responsibility for:

- Where appropriate, plan, implement and manage modally integrated public transport networks and travel corridors, including operational planning.
- To integrate municipal transport planning with land use planning.

2.9 Objectives and Goals

The PLTF needs to align to the vision and objectives of the Department of Public Works, Roads and Infrastructure which aligns to the National policy. In aligning to the vision and the programs, 5 sections were identified:

6. Transport Infrastructure
7. Transport Operations
8. Community-Based Programmes
9. Transport Regulation
10. Security Management

The five sections developed the following goals:

- Enhance accessibility and ensure the safe, affordable movement of people, goods, and services by delivering and maintaining sustainable, integrated, and environmentally sensitive transport infrastructure that supports social empowerment and economic growth.
- Improve community mobility, especially for those with limited or no access, by planning, regulating, and facilitating integrated land transport services
- Oversee the implementation of strategies and initiatives that promote the development and empowerment of communities and contractors.
- To ensure road safety by regulating traffic, controlling vehicle overloading, implementing road safety campaigns, and managing the registration and licensing of vehicles and drivers.
- Enhance compliance with traffic rules among all road users by implementing road safety education and awareness programs.

Based on the above, a series of objectives were developed that are carried through the chapters of the report. The target for the objectives is indicated in chapter 14. The objectives are defined as follows:

6. Enhance Accessibility:
 - Improved movement of people, goods and services
 - Ensure the LITP's of all municipalities are developed and comprehensive.
 - Ensure the DITP documents are completed for the required planning cycles.
 - Adhere to the scholar transport and rural transport strategies.
 - Optimise public transport in the province.
 - Adhere to the freight strategic plan.
 - Align to the National Rail Masterplan 2025
 - Ensure Affordable transport
 - Ensure that public transport is affordable for the most vulnerable road users.
 - Engage with national government of current policies and plans to improve affordability of transport.
 - Integrate transport planning in the province.
 - Ensure that the freight strategies are updated and implemented.
 - Improved access

- Integrate transport in the province with existing and planned land use.
 - Plan mixed use developments and nodal points.
 - Integrate the tourism strategy to the PLTF.
 - Ensure the LITP and DITP documents are completed.
 - Ensure Scholar and rural transport is accessible and available.
 - Improve Sustainable transport
 - Advance green transport.
 - Promote public transport to be measured as a model increase in public transport.
 - Improved affordable transport.
 - Optimise modal share of transport.
 - Increase connectivity of NMT networks to different modes of transport for both urban and rural communities.
 - Improve Social Empowerment
 - Ensure accesses to communities is increased
 - Ensure affordable public transport to municipalities
 - Ensure access to education through available and accessible public transport integrated through the different modes of transport.
 - Ensure rural transport services for rural communities is accessible and available through the connectivity between NMT and public transport vehicle modes.
 - Increase Economic growth
 - Use transport to improve land value capture.
 - Enhance tourist attractions with transport connectivity.
 - Improve freight efficiencies through appropriate transport planning that aligns to the NRMP.
 - Secure funding for critical corridors and support the development of strategic corridors.
 - Improve safety and security for public transport users as indicated in chapter 11 of this report.
 - Improve safety of road users.
 - Rationalise and integrate public transport.
 - Integrate transport and spatial development planning.
 - Implement the EPWP of roads, NMT and roads infrastructure in the local communities as skills transfer and upliftment.
 - Increase modal share of public transport including aviation.
 - Ensure seamless integration between different modes of transport.
7. Enhance Community Mobility
- Land use and transport integration through the local and district SDF's.
 - Economic corridors and significant corridors need to be enhanced and supported.
 - Improved links and access to rural areas.
 - Improved road infrastructure through the implementation of the RAMS.
 - Improved access to public transport.
 - Improve access to education.
8. Improve Road Safety
- Enforce Traffic regulations.
 - Improve the Overload control on the coal haulage routes and other major and secondary freight routes.
 - Road safety initiatives and programs aimed at educating communities on road safety.
 - Improved road infrastructure through the RAMS project.
 - Reduction in traffic violations through improved and effective law enforcement.
 - Improve NMT infrastructure to reduce collisions between motorists and pedestrians.
 - Improve road safety for NMT users at vulnerable areas such as, but not limited to schools, hospitals, clinics, retirement villages etc.
9. Ensure Implementation
- Rollout of strategic projects based on the PLTF, Provincial Freight Strategy, LITP's, DITP's and the RAMS projects.
 - Prioritise projects for implementation.
 - Secure financial requirements as per the funding strategy to ensure that the strategic and prioritised projects are implemented.
10. Improve Law Enforcement
- Reduce traffic violations through increase law enforcement.
 - Improve safety for public transport users from criminal activity at ranks, stops and on route.
 - Reduce road related collisions.

- Reduce conflicts between road users including conflicts between different modes of public transport.

The objectives are used as the backbone for the PLTF to guide the needs of the province to realise the vision. The measurement and targets of these objectives are contained in chapter 14. The strategies to reach these objectives are contained in the respective chapters.

3 Chapter 3: Status Quo of Transport in the Province

3.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Status Quo Chapter are defined as follows:

- a) *Tables and maps showing-*
 - (i) *Demographic features of industry and economic sectors, with demographic statistics per metropolitan and district municipal area;*
 - (ii) *National and provincial road networks showing the category and state of such networks;*
 - (iii) *Strategic public transport networks, including rail networks;*
 - (iv) *Transport nodes of provincial significance;*
 - (v) *Freight transport routes including the routes for the transporting of dangerous goods contemplated in section 35(5) of the Act; and*
 - (vi) *Spatial development, economic development and housing development in the province, including development initiatives, master plans and development programmes.*
- b) *A description of public transport operations in the province, including minibus taxi, metered taxi, bus and rail transport.*
- c) *A description of interprovincial and interprovincial long-distance services and interprovincial commuter services. There may also be a description of charter and staff services.*
- d) *The status of Integrated Rapid Public Transport Networks (IRPTNs) and Bus Rapid Transit systems, if any, and of the Integrated Public Transport Networks (IPTNs) required by the Act, in the province.*
- e) *A list of perceived problems and issues relevant to land transport in the province.*
- f) *A description of the information systems being kept by the province as required by section 6 of the Act, how this information was used to compile the Provincial Land Transport Framework (PLTF) and the data collection processes being followed.*

The purpose of this chapter is to report on the existing public and freight transport, road safety and demographic conditions of the province. A summary of the existing road condition and road hierarchy, the traffic volumes on National and Provincial roads and the cross-border operations are provided in this chapter. Details on the economic and spatial developments can be found in Chapter 4 and Chapter 5, respectively.

A summary of the chapter is shown below:

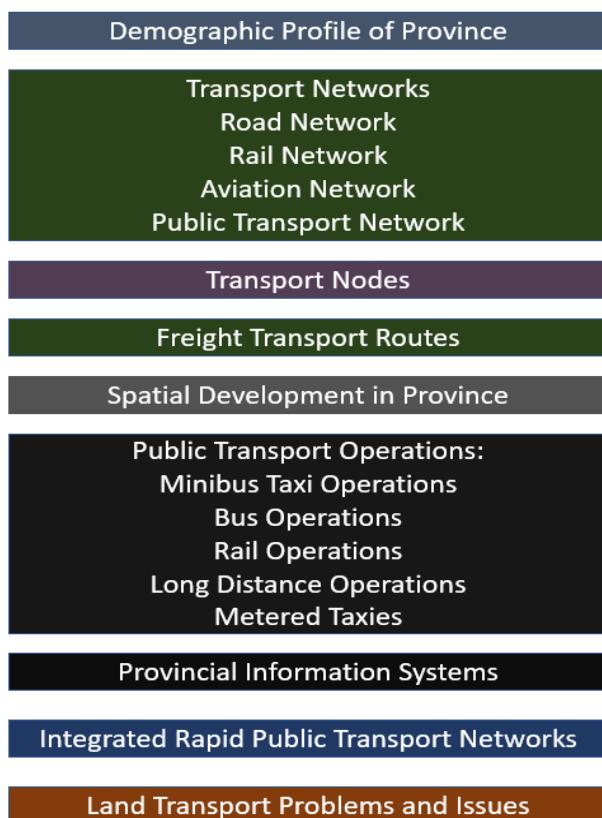


Figure 3-1: Summary of the Chapter

3.2 Demographic and Socio-economic Profile of Mpumalanga Province

The Mpumalanga province is the second-smallest province in South Africa after Gauteng with a total area of 76 495 km². It is situated mainly at the high plateau grassland, bordering the neighbouring countries of Swaziland and Mozambique in the east. The province embraces the southern half of the Kruger National Park, a huge nature reserve with abundant wildlife. The capital of the province is Mbombela, which is located in the Lowveld of the province. Other major towns include eMalahleni, Standerton, eMkhondo, Malalane, Ermelo, Barberton, and Sabie. The principal languages spoken in the province are siSwati (30.5%), isiZulu (27.8%), Xitsonga (10.6%), Sepedi (10.3%) and IsiNdebele (9.9%).

Table 3-1: District Municipalities of Mpumalanga Province and their Respective Local Municipalities

Ehlanzeni District	Gert Sibande District	Nkangala District
City of Mbombela	Chief Albert Luthuli	EMalahleni
Bushbuckridge	Dipaleseng	Emakhazeni
Nkomazi	Govan Mbeki	Thembisile Hani
Thaba Chweu	Lekwa	Dr JS Moroka
	Mkhondo	Steve Tshwete
	Msukaligwa	Victor Khanye
	Pixley ka Isaka Seme	

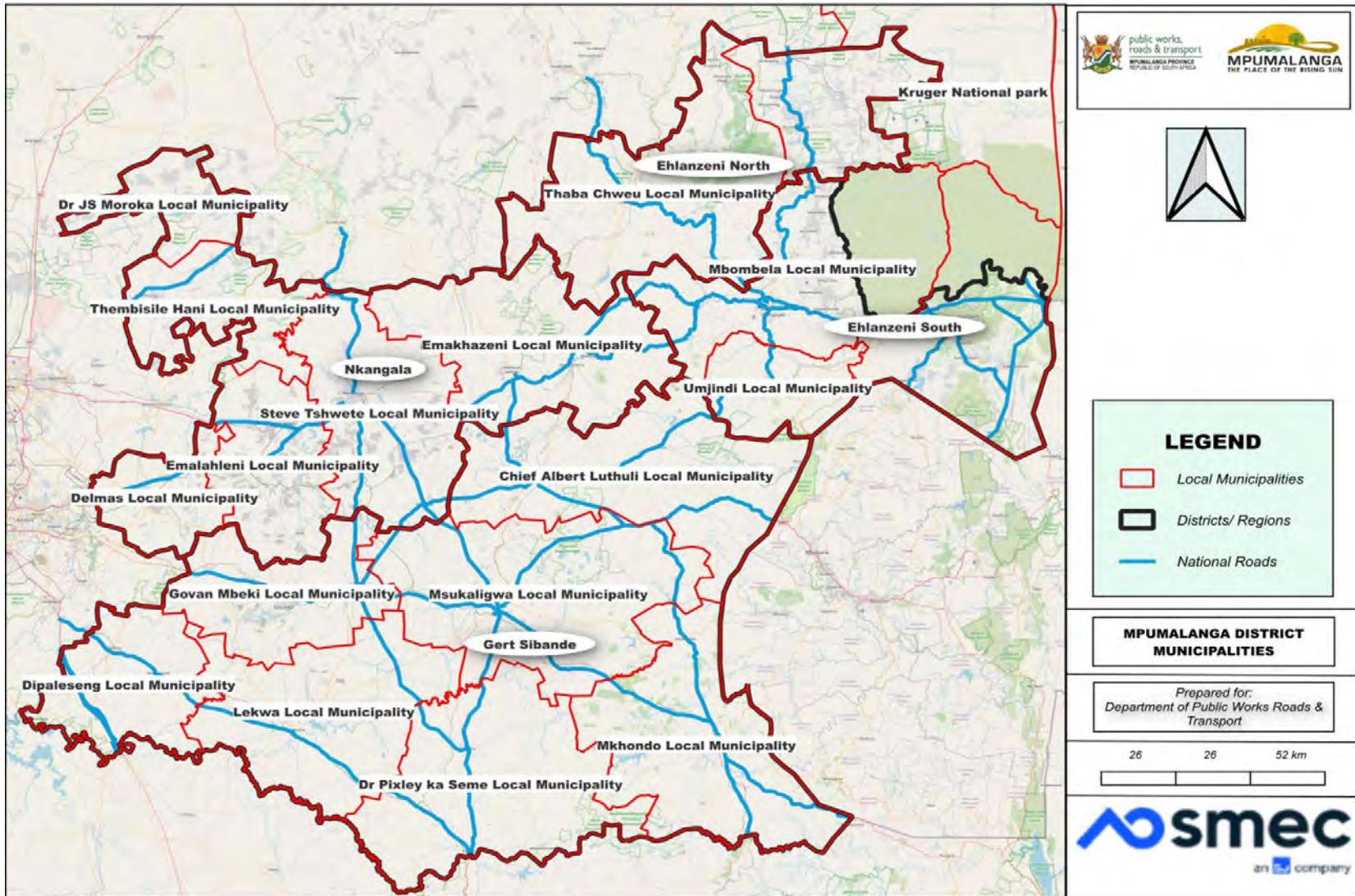


Figure 3-2: Mpumalanga District Municipalities

A report has been provided which shows the comparative information on the size, composition and structure of the population in Mpumalanga Province from 1996 to 2022. The following conclusions can be drawn:

3.2.1 Population growth

Mpumalanga province is the second smallest province in South Africa with an approximate land area of 76 495 km² equivalent to 6.3% coverage of South Africa's land area. The population of Mpumalanga province was 5 143 324 persons in 2022. This is 8% of the South African population.

According to the 2022 census results, Figure 3-3 shows a detailed population growth rate per District Municipality from 2011 to 2022 with an overall provincial growth rate of 1.7% (statssa, 2024).

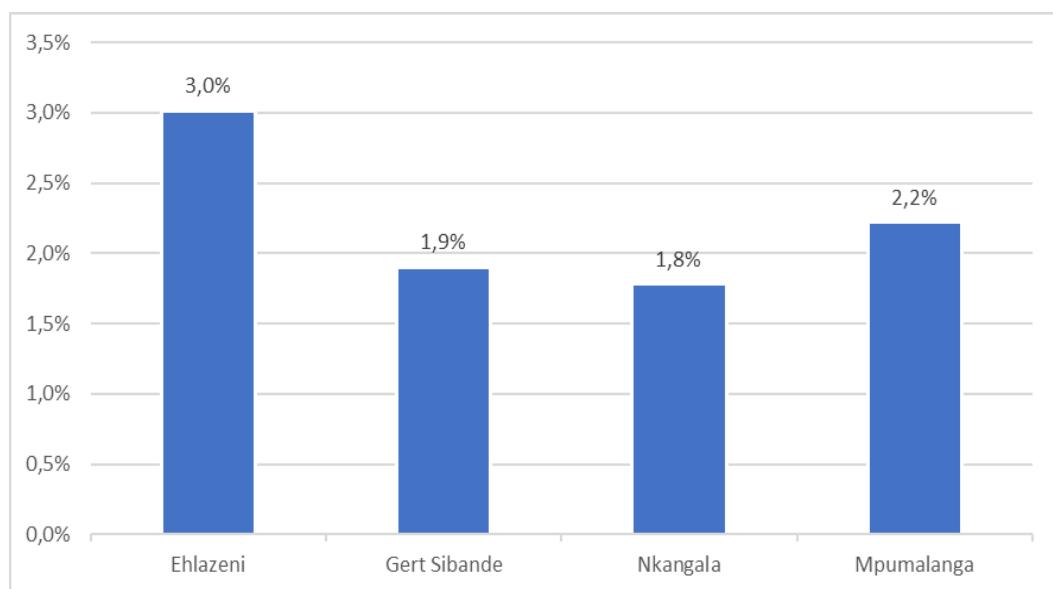


Figure 3-3: Population Growth Percentage from 2011 to 2022

3.2.2 Median age

The population's age distribution in Mpumalanga shows that of the developing country, with a wide base and a small top, for both stats SA data from 2001 until 2022. In both 2011 and 2022, more than half of the population were youth aged 35 years or younger (69.4% in 2011 and 55.7% in 2022). Approximately 5.2% of the population in Mpumalanga is older people aged 65 years and older. Table 3-2 shows the summary of the median age in 2001, 2011, and 2022 from the census.

Table 3-2: Provincial median age

CENSUS	Median Age
2001	22
2011	28
2022	22

3.2.3 Racial composition of Mpumalanga

Mpumalanga Province have a diverse population with different ethnic groups. The population distribution by groups in Mpumalanga is shown in Table 3-3 below.

Table 3-3: Population Distribution

Gender	Population by Gender	Population Group	Population by Group	Racial % by Total Population
Male	2 469 794	Black	4 898 021	95,2%
		Coloured	32 088	0,6%
Female	2 673 530	Indian/Asian	25 882	0,5%
		White	185 730	3,6%
Total Population	5 143 324	Other	440	0,0%

3.2.4 Education in Mpumalanga

Education is the key contributor to the country and provincial economic growth and development. It is imperative to have people with the necessary skills to achieve the development plans and achieve the economic growth target that is to be implemented in each sphere of government. Education attendance for persons aged 5 – 24 years, 73.4% attend the educational institutions with 26.6% not attending. Figure 3-4 shows the highest educational level for people aged older than 20 years with 11.7% having no schooling at all according to 2022 census records.

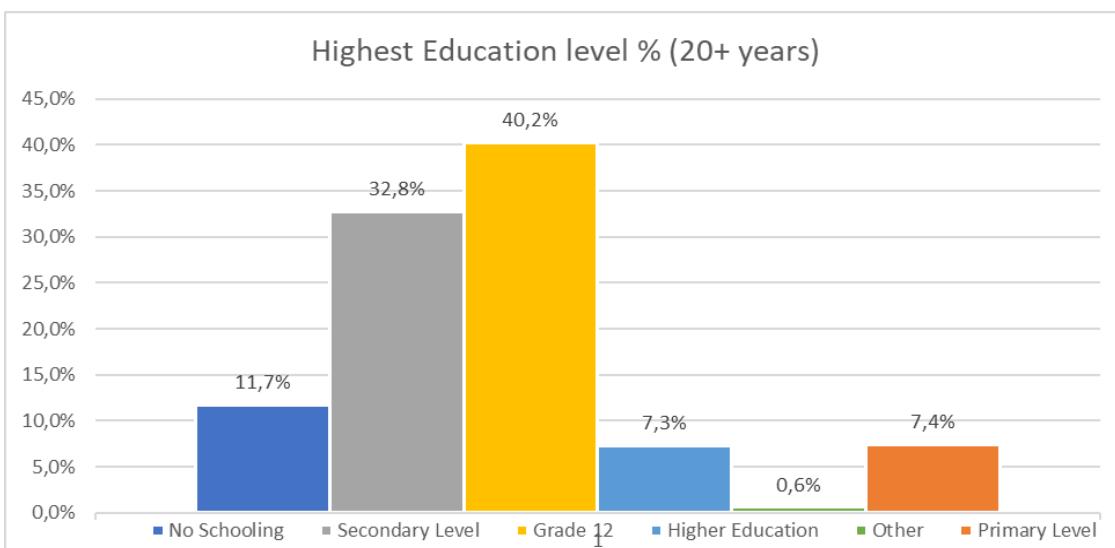


Figure 3-4: Education Composition

3.2.5 Housing numbers

Table 3-4 shows a significant decline in average household size and an increase in formal dwellings across the province between 2001 and 2022.

Table 3-4: Household Size

Dwelling Type	% within province		
	2001	2011	2022
Formal	72.2	83.8	92.2
Informal	14.5	10.9	5.8
Traditional	13.0	4.5	1.8
Other	0.3	0.8	0.2

No. of Household	785 470	1 075 466	1 421 721
Ave. Household Size	4.3	3.8	3.6

3.2.6 Economic Development

Mpumalanga's economy accounts 6.3% of the national GDP in 2011 (National Planning Commission, 2011). The mandate of the provincial economic growth is to preserve the environment, to transform the economy by creating employment opportunities and sustainable livelihood. The economic development in Mpumalanga is affected by the high unemployment staggering rate of 36.1% in 2022. There are approximately 363,800 discouraged workers in Mpumalanga. In 2022 the Mpumalanga's employment increased over a year by 1 333 812.

Table 3-5: Employment figures per sector

Employment Sector	Q4 2021		Q4 2022	
	SA	MP	SA	MP
Formal Sector	67.2%	55.7%	68.9%	59.2%
Informal Sector	18.2%	24.7%	18.5%	25.6%
Agriculture	6.0%	10.1%	5.4%	7.7%
Private Households	8.7%	9.5%	7.2%	7.5%

The following conclusions are drawn:

- In Mpumalanga 45% of the population lives in rural areas, 9% live on farms (TIPS, 2024).
- There is no metro in the province just four secondary towns, namely: the City of Mbombela, EMalahleni, Govan Mbeki, and Steve Tshwete.
- There is low income per household within the province, which results in low car ownership, which has a direct influence on the level of public transport services provided due to the high demand for public transport.
- The province will have to focus more on public transport accessibility issues and the importance of Non-Motorised Transport.

3.3 Transport Network

In South Africa, there are different Transport networks, such as: Road networks, Public Transport networks, Rail networks, and Aviation networks.

3.4 Road Network Hierarchy in Mpumalanga

Mpumalanga province has a total road network of about 24 000 km, with approximately 12% of which are national roads under SANRAL, 58% provincial roads under DPWRT and 30% tertiary roads under local municipalities.

3.4.1.1 South African National Roads Agency Limited (SANRAL)

SANRAL is an independent, statutory company of the South African government. SANRAL has a distinct mandate to finance, improve, manage and maintain the national road network of the country. This network currently consists of 23 512 km of national roads in South Africa. This network includes toll roads and non-toll roads.

In Mpumalanga, SANRAL manages national roads that are for regional connectivity and economic activities. There are three key national roads within the borders of Mpumalanga which are under SANRAL management:

- **N4** – SANRAL awarded a concession of the N4 to Messrs Trans African Roads Agency (TRAC) to build and operate the N4 from Pretoria to Maputo through Mpumalanga. This road forms part of the Maputo corridor, which is a trade route for South Africa.

- **N11** – it forms part of the Mpumalanga Coal Haul Network between Ermelo and Hendrina going to Middleburg, providing an important link to the mining and agricultural sector within the province and national.
- **N17** – it connects Mpumalanga to the Swaziland border. It is providing an important link to the mining and agricultural sector.
- **N12** – The N12 connects Johannesburg to the N4 at EMalahleni. It also supports the coal mining industry in the province.
- **N2** – the N2 does not have the direct route in the province but it is more connected to neighbouring province, which influence trade and travel in the province.

These national roads are the essential road networks for the freight movement for industries such as mining, agriculture, and tourism, which are significant contributors to the development of the Mpumalanga economic sector.

Besides the key national roads, SANRAL also manages other roads in Mpumalanga province that are essential for economic activity and connectivity within the province, such as the N3, R23, R35, R37, R40, R38 as shown in Figure 3-5 below.

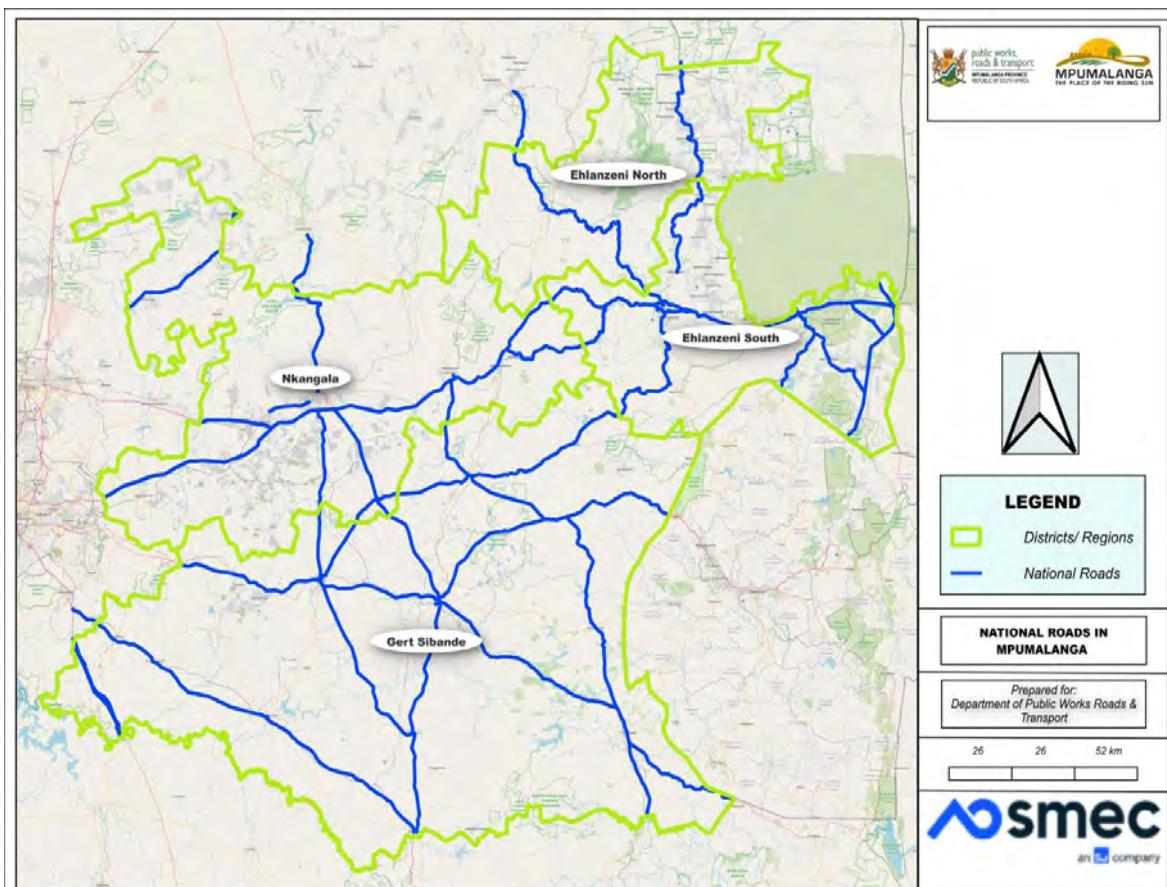


Figure 3-5: SANRAL roads in Mpumalanga Province

Figure 3-6 below present existing SANRAL roads with declaration of Mpumalanga provincial roads as it gazetted on (Transport, 2024) on the 22 November 2024.

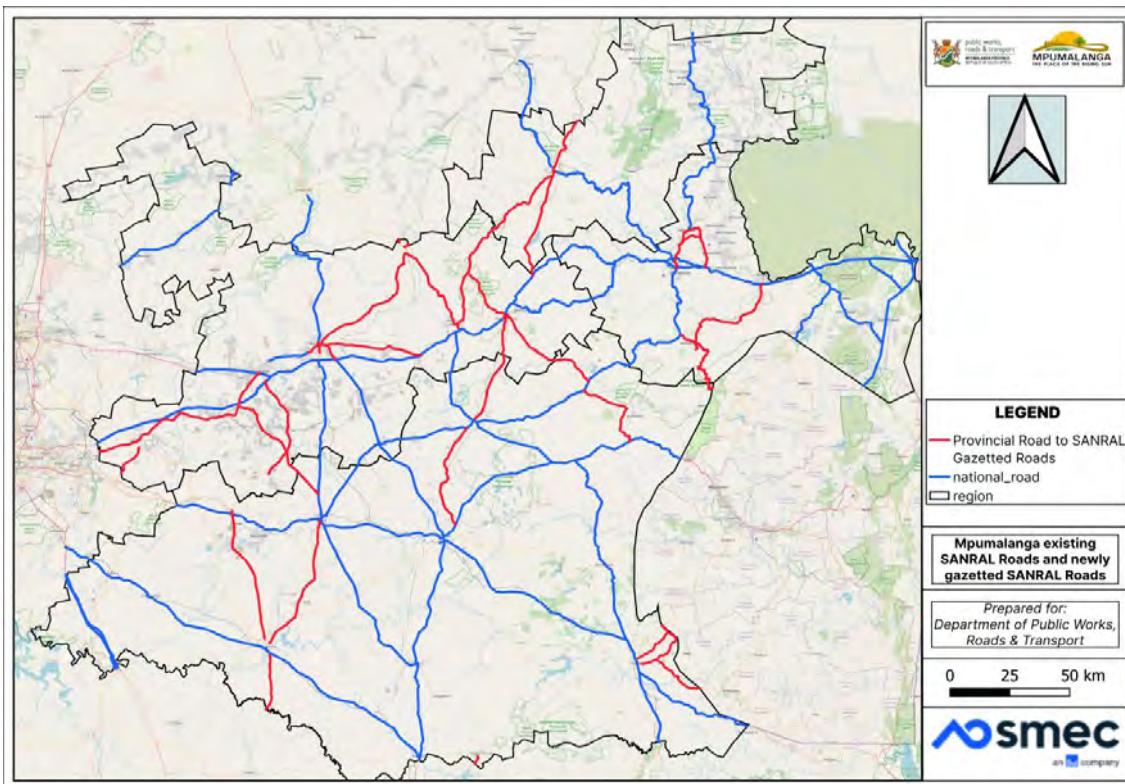


Figure 3-6: SANRAL roads with newly gazetted roads.

3.4.1.2 Mpumalanga Provincial Road Network

Department of Public Works, Roads, and Transport (DPWRT) manages the provincial roads infrastructure within Mpumalanga and connects local municipalities also with other provinces in South Africa and neighbouring countries. Most of the road network is found in Gert Sibande District, followed by Nkangala District and fewer roads are found in Ehlanzeni District Municipality. The total provincial road network in the RAMS study (2023) compromised of an estimated 40% paved and the rest is gravel roads, as shown in Table 3-6 and Figure 3-8, that summarise paved and gravel roads by district.

Table 3-6 below highlighted provincial roads declared as national roads by department of transport (Transport, 2024)

Table 3-6: Mpumalanga Provincial Road network length per District

District	Paved(km)	Gravel (Km)	Total (km)
Ehlanzeni	1701	1561	3262
Gert Sibande	2016	4955	6971
Nkangala	1790	1834	3634
Road transferred to SANRAL	-937	-	-937
Total (km)	4570	8360	12930

Figure 3-7 below show Mpumalanga provincial roads without roads that are declared national roads as from November 2024, (Transport, 2024).

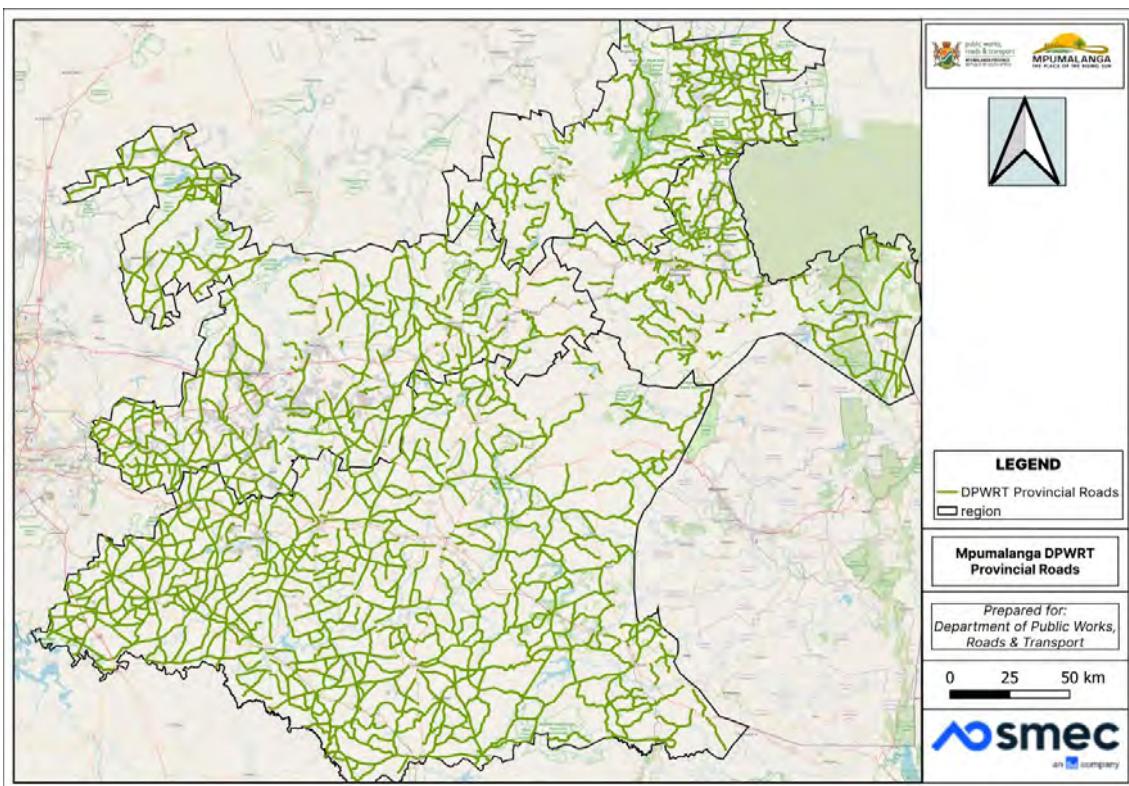
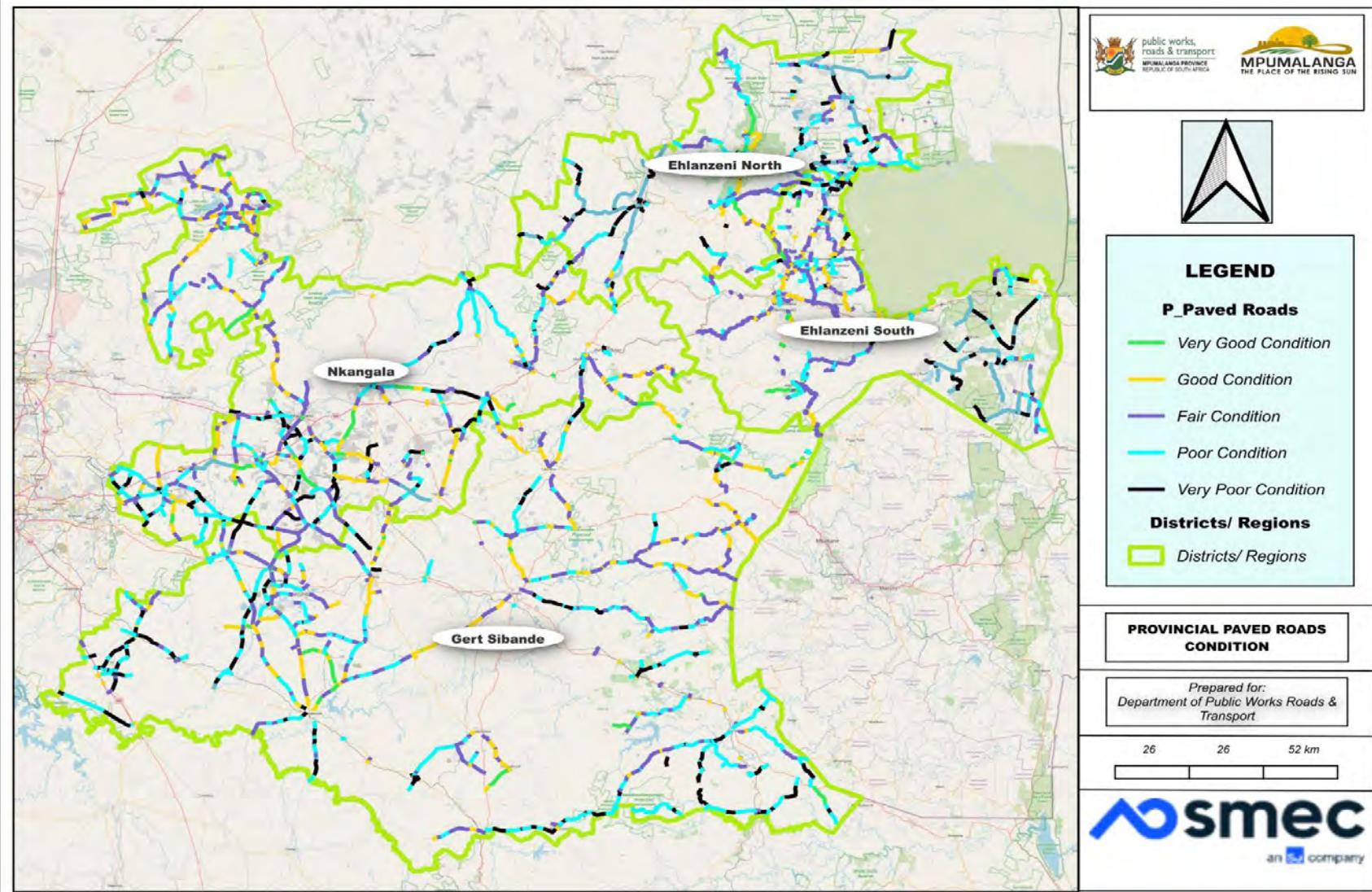


Figure 3-7: DPWRT Provincial roads.

A condition assessment is also shown in Table 3-7 and Figure 3-8 and Figure 3-9 respectively. The majority of paved road network in Mpumalanga is a poor to fair condition (60%), while majority of the unpaved roads are in very poor to poor condition (88%).

Table 3-7: Condition Assessment of Provincial Roads

Type	Road Condition (2023)						Total km
	Very Poor %	Poor %	Fair %	Good %	Very Good %	No Data %	
Gravel	52,1%	35,5%	9,1%	0,6%	0,2%	2,4%	8248,44
Paved	13,9%	29,5%	30,5%	15,7%	3,7%	6,6%	5507,99



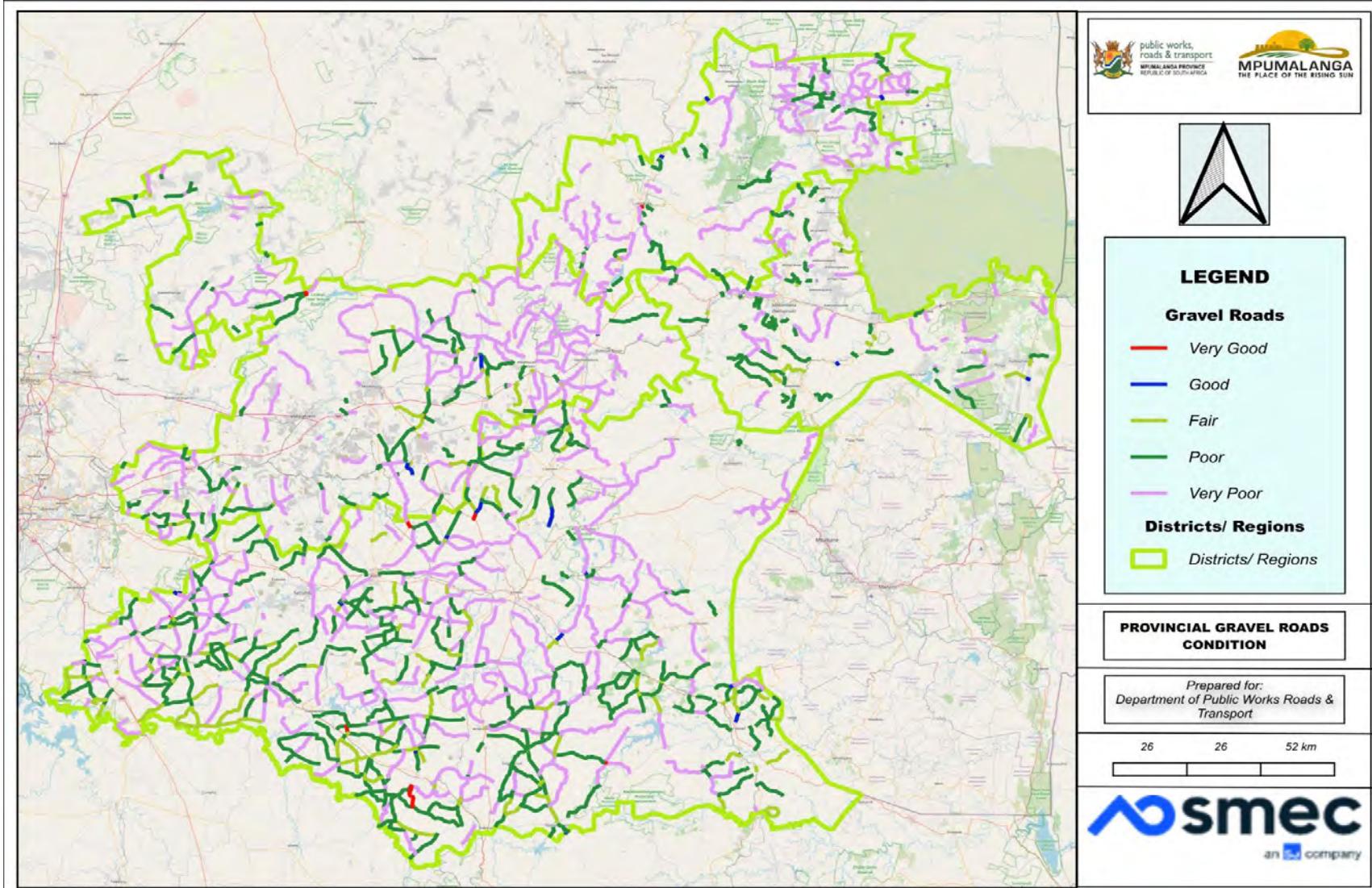


Figure 3-9: Gravel Roads Conditions in Mpumalanga Province

Provincial Land Transport Framework

Mpumalanga Provincial Land Transport Framework (MPLTF)

Prepared for Department of Public Works, Roads, and Transport –
Mpumalanga Province

SMEC Internal Ref. BG426

17 March 2025

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3.4.1.3 Coal haulage by Road Network

Mpumalanga have a significant mineral resource, which is coal. There are coal-based industries within the province, such as Sasol and Eskom power stations. Thermal coal is transported out of the province to areas, such as Richards Bay.

Coal Haulage routes are utilised by trucks transporting coal to Eskom's power stations by road. Due to rail network bottlenecks in the country, there is a growing trend of coal transportation on the road networks of the province.

The rapid increase in coal hauling on the road networks has resulted in significant road condition deterioration to the point where the surface on some roads has broken up completely.

Gert Sibande and Nkangala District Municipalities are the most affected districts, due to high volumes of coal transportation on their road networks which only has two major structural layers, it compromises their structural integrity because of this coal haulage impact (MDPWRT, 2024).

3.4.2 Traffic Volumes

Traffic volume information is generally represented by Annual Average Daily Traffic (AADT), which is defined as the total volume of vehicle traffic travelling on the road network for 365 days per year. For this framework AADT referred to is the daily vehicles on surveyed links of the road represent the total length of the link that the vehicles counted travelled in Mpumalanga province.

3.4.2.1 SANRAL National Road

Based on SANRAL 2019 traffic information it is estimated that over 3600 km travelled by vehicles on national roads with overall total of 809 806 ADT and 146 493 ADTT on SANRAL roads recorded through 135 count stations in Mpumalanga province. The summary of the lowest and highest ADT and ADTT along SANRAL road at specific count station along the route is shown in Table 3-8 below.

Table 3-8: Mpumalanga SANRAL 2019 Summary Traffic Information

Road	Low			High		
	Count Station	ADT	ADTT	Count Station	ADT	ADTT
N2				Piet Retief North	7 367	1 426
N3	Grootvlei I/C	12 559	4 045	Vereeniging I/C	14 624	5 293
N4	Komatipoort WB	817	811	TRAC Schonaland	44 080	3 736
N11	Ermelo North	4 376	1 028	Middleburg North	6 810	592
N12	Watermeyerst. West	13 364	2 081	Sundar	24 244	4 592
N17	Ermelo Plaza 1	4 946	886	Trichardt Plaza 1	9 324	1 012
R23	Greylingstand	3 837	665	Standerton	4 110	893
R35	TS Amersfoort	2 695	429	Nutfield (MS6)	4 905	1 318
R36				MP Welgelegen	694	217
R38	Badplaas	3 755	438	MP Riverloo	5 202	516
R40				MP Nelspruit North	30 873	1 732
R51	N3TC Balfour North	1 770	343	N3TC Balfour South	2 458	728
R54				N3TC Vereeniging	1 835	725
R65				MP Ermelo East	759	53
R540				MP Rooidraai	6 476	1 144
R541				MP Badplaas South	3 997	326
R544				MP Verena	2 752	159
R545				MP Kriel	8 104	1 960
R555	Middleburg East (MS12)	5 521	923	Klein Olifantsrivier	14 412	1 701

R568				MP Mkhulwane	4 714	410
R570				Malelane (MS26)	7 915	876
R757	Van Dyksdrift (MS5)	7 107	2 249	Midwit NB (MS9)	7 412	1 249
	Wonderfnt East (MS19)	1 474	653	Wonderfnt R33 (MS18)	3 033	520
				N3TC Dasville	1 039	251

From Table 3-8, the N3 have the highest volume of ADTT followed by N12 with R65 recorded the lowest ADTT volume based on the table of SANRAL traffic information.

3.4.2.2 DPWRT Provincial Road

It is estimated that over 8 300 km travelled by vehicles on the gravel roads with 294 039 overall AADT, whilst over 5 400 km travelled by vehicles on the paved roads with 4 480 024 overall AADT in Mpumalanga provincial road network. The summary of the Lowest and Highest AADT on the provincial road network is shown in Table 3-9 below.

Table 3-9: Summary of the AADT

Category	Gravel		Paved	
	Road name	AADT	Road name	AADT
Low	D1412	2	D2138	3
Very High	D237	5609	P17/7	39888

The AADT and the roads connected to the coal haul routes and mining areas need to be decongested and the freight mobility should be improved.

3.4.3 Trip Generations

According to National Household Travel survey (NHTS, 2022), the majority of work-related travel were made using public transport, while majority of educational travel were made by walking. The travel survey modal split for Mpumalanga is shown in Table 3-10 below.

Table 3-10: Provincial Travel Survey Modal Split

Mpumalanga	Modal Split, Weekday (%)					
	Car Driver	Car Passenger	Public Transport	Walking	Cycling	Other
All Trips	10,1%	8,3%	31,1%	49,5%	0,0%	1,0%
Work Trips	28,6%	7,3%	36,4%	25,7%	0,5%	1,5%
Educational Trips	2,1%	7,4%	19,8%	69,3%	0,1%	1,3%

It can be seen from the table above that the majority of trips are made by walking within the province.

3.4.4 Car Ownership

Mpumalanga province accounts for 7.05% of live vehicle population in South Africa (National Traffic Information System, June 2024). A survey of access to private vehicles in the province shows that is at 22.5%, with less than 2% of the population in rural areas that have access to private vehicles.

Majority of the population does not own motorised vehicles, they are therefore inter-relying on other modes of transport (public transport, car share, NMT, etc.) for business, educational, work and other trips as shown in Table 3-11 below.

Table 3-11: Car Ownership in Mpumalanga

District Municipality	Type of vehicles owned (% within district municipalities)						
	Motorcycle	Company car/bakkie/station wagon 4x4	Household car/bakkie/station wagon/4x4	Relative/friend car/bakkie/station wagon/4x4	Minibus/Kombi	Truck	Other
Provincial Land Transport Framework	SMEC Internal Ref. BG426						

Ehlanzeni	0,9	21,5	55,8	18,6	2,3	0,9	*
Gert Sibande	0,8	12,0	76,9	7,2	2,2	0,3	0,6
Nkangala	3,2	15,6	67,3	10,6	1,2	0,9	1,2
Mpumalanga	1,6	16,4	66,7	12,1	1,9	0,7	0,6

3.4.5 Road Safety

Road safety units are to ensure that the methods and measures are implemented by road authorities to ensure a reduction in crashes, deaths, and injuries for road users (pedestrians, cyclists and motorists) (RTMC, 2024). Road safety contribute to enforcing and implement the measure of safer roads in the country.

A collective approach by all stakeholders in the province is required through education awareness programmes in all provincial and local spheres of government departments responsible for traffic and road safety, including local authorities, transport entities, as well as the private sector and NGOs.

Table 3-12: Road Accident Statistics in Mpumalanga (DCSSL, 2022/23)

Accidents	2019/20	2020/21	2021/22	2022/23
Crashes	7009	5352	6019	5959
Fatalities	1190	913	1190	1094
Serious Injuries	4349	2855	3356	3349
Slight Injuries	7576	5694	6305	6438

There was an increase in the number of accidents between 2020/21 and 2021/22 with an 18% average increase. Between 2021/22 and 2022/23 there is a decrease in accidents by 2% which is close to the target of reducing road crashes by 3% per annum, according to (DCSSL, 2022/23). In 2022/23 fatalities were reduced by 8% compared to the same period in 2021/2022.

Speeding of motorists remain the highest contributor to possible causes of accidents, which poses a major challenge in curbing and reducing road fatalities and injuries. To drastically reduce road related accidents, the province needs to implement fixed speed enforcement cameras at strategic locations and increase visible policing.

Truck Stops are safe facilities that are usually located near a busy freight corridor, it is designed with large parking areas for heavy vehicles. It offers the services for professional heavy vehicles drivers to rest and refresh. Driver's fatigue is one of the main courses of vehicle accidents on the road, the truck stop then offers resting stops for drivers that will reduce the accidents due to fatigue. According to (Department of Transport, National Freight Databank of SA, 2024), it is envisaged that Trucks Stops will make a significant contribution to road safety in South Africa.



Figure 3-10: R40 Truckstop Mbombela

3.5 Strategic Public Transport Network

3.5.1 Overview

Public transportation is the most cost-effective mode for the people of Mpumalanga Province, providing access to educational institutions, work, and marketplaces, while improving citizens' livelihoods. Mpumalanga has 49% rural areas, which necessitates public transportation infrastructure. Buses and minibus taxis are the primary modes of public transit in Mpumalanga. 29% of the rural population and 31% of urban residents use taxis. There is no local urban rail service in the province.

The National Household Travel Survey, conducted in 2020, illustrates the main mode of transport used by household members by a district municipality, in a one-way movement from an origin to a destination to fulfil a specific purpose or undertake an activity. In Table 3-13 Below is the percentage of passengers that made use of public transport in the different districts of Mpumalanga as per the Mpumalanga NHTS 2020:

Table 3-13: Main Mode of Transport used by household

Mode of Travel	Statistics (numbers in thousands)	District municipality			
		Ehlanzeni	Gert Sibande	Nkangala	Mpumalanga
Public Transport	Train	Number	*	*	4
		Per Cent	0.1	0.2	0.1
	Bus	Number	169	55	70
		Per Cent	11.3	8.2	8.8
	Taxi	Number	251	166	358
		Per Cent	16.8	24.9	23.2
Total	Total	Number	420	221	1073
		Per Cent	28.2	33.3	32.1

3.5.2 Minibus Taxi Operations

Minibus taxis are the dominant provider of public transport services in Mpumalanga as can be seen in Table 3-13 above. Private operators provide minibus services by obtaining passenger transportation licenses from operational licensing boards. The operating licences establish the rank and routes for which services will be supplied.

Each municipality has a different type of minibus taxi service because of variations in population density, economic activity, and geographic location. The majority of commuters in the province use this mode of transport to commute to work, business and educational institutions, in densely populated locations. They also prioritize off-peak hours to accommodate other travel requirements, like shopping and access to medical facilities. People typically use NMT in low-density areas, and passengers are more likely to receive door-to-door service from minibus taxis in these locations.

Taxi drivers typically wait until all the vehicles are used before leaving regions with high population density and high demand for minibus taxi transportation. Longer wait times before a full vehicle may exit the rank are the outcome of this. Due to limited demand, taxi operators in rural areas typically cannot wait until their vehicles are full. This results in poor utilization rates and high end-user costs, making public transportation unaffordable for most people.

3.5.2.1 Ehlanzeni District Municipality

There is a total of 95 operational taxi ranks within the Ehlanzeni District Municipality, 35 ranks are formal, 4 are semi-formal, and the remaining 56 are informal according to the Ehlanzeni DM DITP, 2019. The Department of Public Works, Roads and Transport has reported that the District Municipality is served by twenty taxi associations, which operate a combined fleet of approximately 12 491 minibuses. The number of active members in the associations is 4 469. Table 3-14 below indicates the taxi associations per local municipality as received from the Department of Public Works, Roads & Transport:

Table 3-14: Taxi Associations Per Local Municipality

Local Municipality's	Nkomazi	Thaba Chweu	Bushbuckridge	Mbombela
Taxi Associations	Lebombo	Graskop	Bushbuckridge	Whitehazy
	Malelane	Lydenburg	Mathibela	Kabokweni
		Sabie	Mhala United	Topstar
			Mkhuhlu	Matsulu
			Successful United	Ngodwana
			Thulamahashi Hluvukani	Barberton
			Thulamahashi Mkhuhlu	
			Thabakgolo	
			Bohlabela	
	Total	2	3	9
				6

There are 495 minibus taxi routes identified in the Ehlanzeni District Municipality (Ehlanzeni DM DITP, 2019), however, according to the PRE there are 406 routes, which are being used by 66 ranks. It should be noted that some associations may use more than one rank, hence exceeding the overall number of ranks available. The table below indicates the number of routes and ranks per association as per PRE information:

Table 3-15: Minibus Taxi Routes Identified in EDM

No	Association	Routes	Ranks
1	Ngodwana Taxi Association	26	4

2	Matsulu & Kaapmuiden Taxi Association	25	14
3	Barberton Taxi Association	24	5
4	Kabokweni Taxi Association	34	2
5	Top Star Taxi Association	46	7
6	White Hazy Taxi Association	34	3
7	Mathibela Taxi Association	10	6
8	Mkhuhlu Taxi Association	23	2
9	Bushbuckridge Taxi Association	20	3
10	Thabakgolo United Taxi Association	5	1
11	Thulamahashi Taxi Association	9	3
12	Malalane Taxi Association	29	1
13	Lebombo Taxi Association	38	2
14	Sabie Taxi Association	22	1
15	Graskop Taxi Association	13	2
16	Lydenburg Taxi Association	15	1
17	Bohlabela Local and Long-distance Taxi Association	5	4
18	Mhlala United Bus Taxi Association	3	2
19	Successful United Taxi Association	12	2
20	Bohlabela Taxi Association	5	1
Total		406	66

The conditions listed below apply to minibus-taxi modal facilities (Ehlanzeni DM DITP, 2019):

- 85% of the Taxi Facilities in the district do not have proper shelter for commuters.
- 16% of Taxi Facilities have ablution facilities.
- There is a need for benches for waiting commuters.
- There is a need for proper lighting at the taxi rank facilities.

3.5.2.2 Gert Sibande District Municipality

The Gert Sibande District Municipality has approximately 50 taxi facilities, of which 60% are formalised. Of these facilities, 63% provide local commuter services, while 8% offer long-distance commuter services (Gert Sibande DITP 2014-2018). 28 taxi associations serve the district. The vehicles operating in the district are 6 162, totalling 2 094 active members. Table 3-16 below indicates the taxi associations per local municipality, as received from the Department of Public Works, Roads & Transport:

Table 3-16: Taxi Associations Per Local Municipality

Local Municipality's	Govan Mbeki	Chief Albert Luthuli	Msukaligwa	Dipaleseng	Mkhondo	Lekwa	Dr Pixley Ka Isaka Seme
Taxi Associations	Bethal	Carolina	Ermelo	Balfour	Amsterdam	Standerton	Amersfoort
	Vukanini	Dundonald	Kwazanele		Driefontein	Vulindlela	Daggakraal
	Zamokuhle	Embuleni	Lothair		Ilswepe		Vukuzakhe
		Fernie Long	Sheepmoor		Piet Retief united		
		Fernie Local			Piet Retief long		
		Kangwane			Piet Retief Transport		
		Lomagadlela					
		Oshoek					
		Ziyabheja					
Total	3	9	4	1	6	2	3

The PRE information recorded that there are 559 taxi routes in the district municipality, 98 of which are long-distance with 34 ranks. The table below indicates the number of routes and ranks per Association:

Table 3-17: Minibus Taxi Routes in GSDM

No	Association	Routes	Ranks
1	Amersfoort Taxi Association	20	1
2	Amsterdam Taxi Association	37	1
3	Balfour Taxi Association	23	1
4	Bethal Taxi Association	34	3
5	Carolina Taxi Association	30	1
6	Daggakraal Taxi Association	7	2
7	Driefontein Taxi Association	18	1
8	Dundonald Taxi Association	13	1
9	Embhuleni Taxi Association	22	2
10	Ermelo Taxi Association	28	1
11	Fernie Long Taxi Association	10	1
12	Fernie Local Taxi Association	8	1
13	Ilswepe Taxi Association	7	1
14	Kangwane Taxi Association	9	1
15	Kwazanele Taxi Association	3	1
16	Lothair Taxi Association	9	1
17	Lomagadlela Taxi Association	15	1
18	Oshoek Taxi Association	13	1
19	Piet Retief United Taxi Association	24	1
20	Piet Retief Long Taxi Association	38	1
21	Piet Retief Transport Taxi Association	26	1
22	Standerton Taxi Association	13	1
23	Sheepmoor Taxi Association	28	2
24	Vukanini Taxi Association	43	2
25	Vukuzakhe Taxi Association	20	1
26	Vulindlela Taxi Association	26	1
27	Zamokuhle Taxi Association	22	1
28	Ziyabheja Taxi Association	13	1
Total		559	34

The conditions listed below apply to minibus-taxi modal facilities (Gert Sibande DM DITP, 2014):

- 60% of the taxi facilities are informal.
- 64% of the taxi facilities in the district do not have proper shelter for commuters.
- 24% of the taxi facilities have ablution facilities.

3.5.2.3 Nkangala District Municipality

There are 57 taxi ranks within the Nkangala District Municipality, of which 61% are formal. According to the Nkangala DM DITP 2022-2027, there is a total of 24 taxi associations within the district municipality however, the Department of Public Works, Roads, and Transport has a record of 23 taxi associations which has an operational

fleet of 8 856 minibuses. The number of active members in the associations is 2 988 Table 3-18 below indicates the taxi associations per local municipality, as recorded in the DITP 2024-2027:

Table 3-18: Taxi Associations Per Local Municipality

Local Municipality's	Dr JS Moroka	Steve Tshwete	Emalahleni	Thembisile Hani	Victor Khanye	Emakhazeni
Taxi Associations	Thathazakho	MULDTA	Duvha United	KULLDTA	Delmas	Emthonjeni
	Valschfontein	NDTA	Kriel	KTA		Sakhelwe
	MAKATA	MDTA	Ogies			BELDTA
	Vaalbank	HTA	LOTA			
	Mabloma		WTA			
	Marapyane					
	CENTOP					
	SEMUNYE					
	MATA					
Total	9	4	5	2	1	3

The Nkangala DM, DITP 2022- 2027 identified 286 routes being utilized by the district municipality however, the information received from the PRE illustrates that there are a total of 492 routes, which can be seen in Table 3-19 below:

Table 3-19: Minibus Taxi Routes in NDM

No	Association	Routes	Ranks
1	Emthonjeni Taxi association	20	2
2	Sakhelwe Taxi association	7	2
3	Mdta Taxi Association	25	3
4	Hendrina Taxi association	8	1
5	Kriel Taxi association	16	1
6	Mashaleng Taxi association	15	3
7	Ogies Phola Taxi association	23	2
8	Vaalbank Taxi association	29	3
9	Mabloma Taxi association	12	3
10	Marapyane Taxi association	15	4
11	Delmas Taxi association	18	2
12	Duvha Taxi association	30	1
13	ULDTS Taxi Association	12	1
14	LOTA Taxi Association	24	2
15	WTA Taxi Association	10	2
16	MULLDTA Taxi Association	35	1
17	Nasareth Taxi association	15	1
18	Kwaggafontein Taxi association	18	1
19	KULLDTA Taxi Association	83	6
20	Thathazakho Taxi association	35	2
221	Valschfontein Taxi association	12	2
2212	Makata Taxi Association	23	1
23	Belfast Taxi association	7	2
Total		492	48

The conditions listed below apply to minibus-taxi modal facilities (Nkangala DM DITP, 2022):

- 39% of the taxi facilities are informal.
- 54% of the taxi facilities in the district do not have proper shelter for commuters.
- 39% of the taxi facilities have ablution facilities.
- 32% of the taxi facilities have offices.
- 28% of the taxi facilities are fenced.

3.5.2.4 Mbombela CITP

There are four taxi associations operating a fleet of some 1 200 minibus taxis serving the Mbombela municipal area, with average capacity of 15 passengers. Overall, taxis carry approximately 15% to 20% of peak period passengers. Unlike buses, taxis tend to load to capacity at the beginning of a trip and generally have a high average utilisation rate (UR) defined in terms of passenger loading during peak hours. However, taxis are unable to compete with bus transport on longer trips, at a competitive fare. The service areas of the taxi associations are as follows:

- Whitehazy Association: Nyongane/Mashushu/Legogote
- Kabokweni Association: Gutshwa/Kabokweni/Clau clau
- Topstar Association: Msogwaba/Daantjie/Lekazi
- Matsulu Association: Matsulu

Apart from the service for long distance trips in a difficult competitive environment, taxis provide an effective peak and off-peak service within and between the eastern residential townships. They also provide a free distribution service from Nelspruit CBD for their passengers. This responsibility is shared by all four associations.

The two main corridors for the morning peak hour trips (07:00 to 08:00) entering Mbombela are along the Kanyamazane Rd via Kamagugu (more than 50 trips during the peak hour period) and from the White River via Rocky's Drift Road. Trips vary on various sections of the road with 31-40 trips during the peak AM hour outside Rocky's Drift to 52 trips just before entering Mbombela into Madiba Street

Hazyview is the third significant attractor of commuter trips, but is significantly smaller than the other two. Apart from trips originating in the Mbombela area, Hazyview attracts significant trips from the Bushbuck Ridge area north of Mbombela. Some of the movement occurs on a weekly basis resulting in heavy trip volumes towards Hazyview on a Monday morning with the return on Friday afternoon.

The four largest trip attractors in Mbombela are:

- Nelspruit City 30 000 person trips
- White River Town 7 000 person trips
- Rocky Drift 2 000 person trips
- Hazyview Town 1 000 person trips

The main public transport corridors as per the MLM CITP 2012 are indicated graphically below:

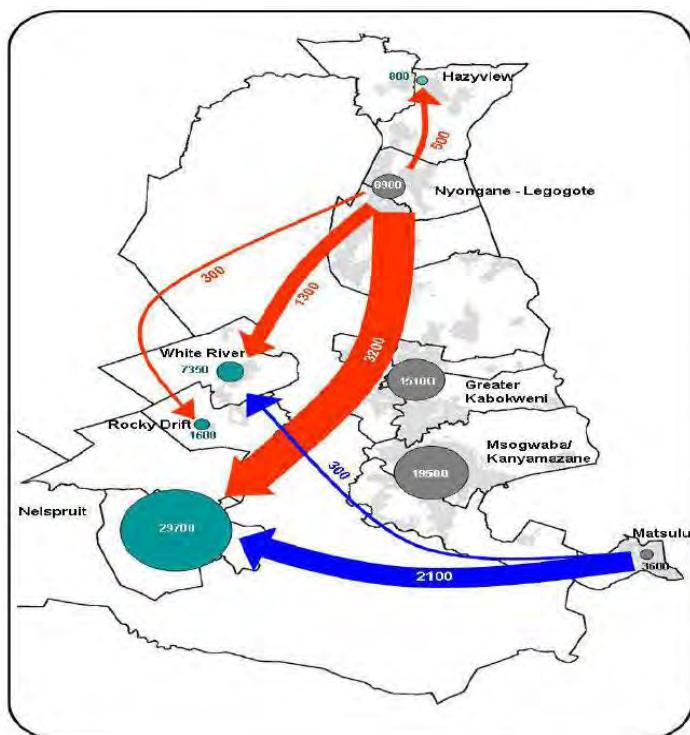


Figure 3-11: AM Peak Period Public Transport Trips from Nyongane – Legogote & Matsulu

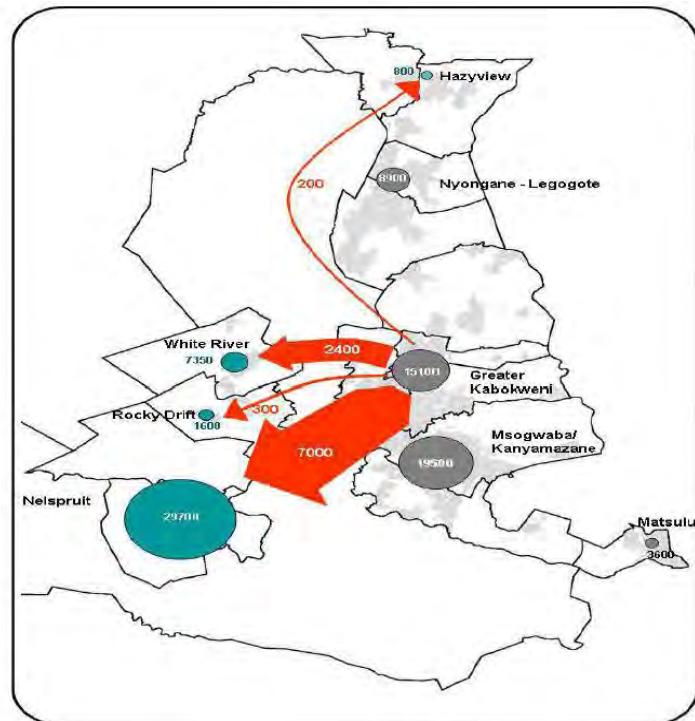


Figure 3-12: AM Peak Period Public Transport Trips from Greater Kabokweni

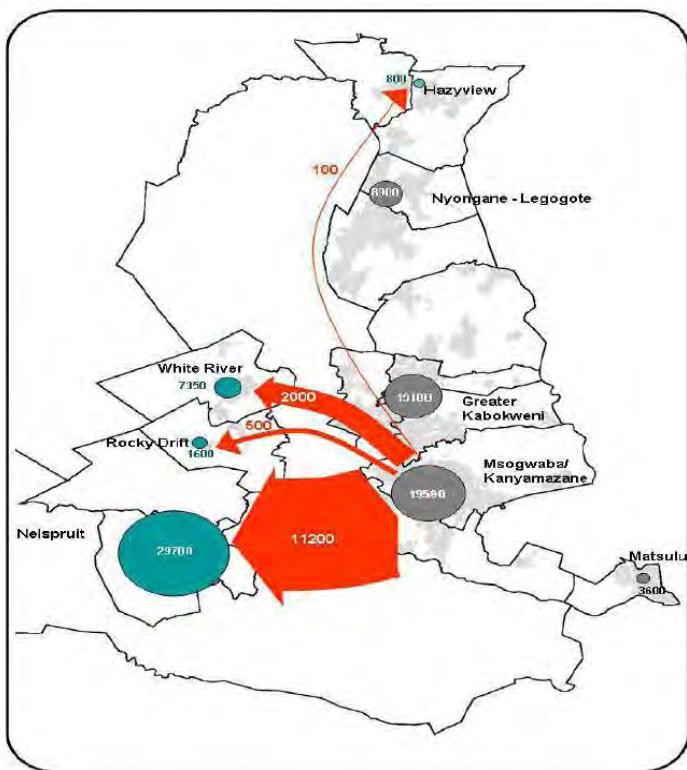


Figure 3-13:AM Peak Period Public Transport Trips from Msogwaba/Kanyamazane

It is noted that the TR was last updated in 2006. According to the Mbombela Public Transport Action Plan compiled in 2008, the number of Public Transport person trips for the AM morning peak period has been forecast to number 64 300 in 2010 and that will grow to 74 200 public transport person trips in 2025.

To address this, there is a planned IRPTN network. This project has however been suspended. The network is proposed as per the figure below.

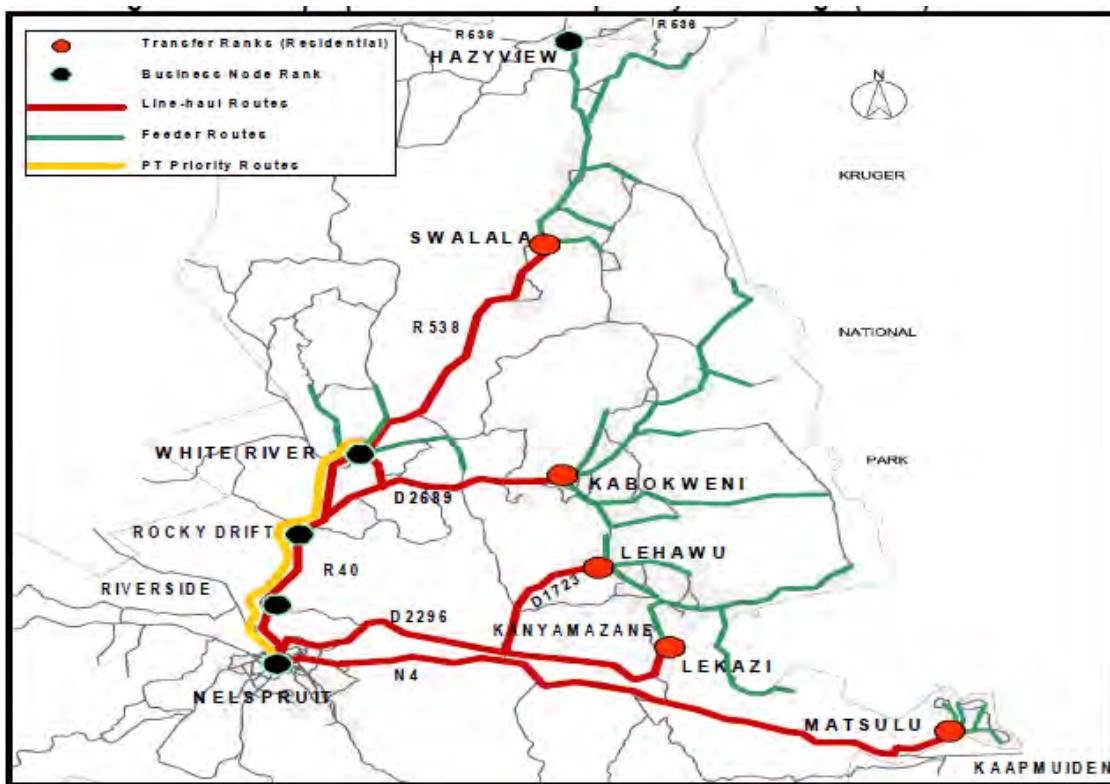


Figure 3-14: The proposed public transport system proposed 2012.

Based on the 2012 IRPTN corridors, a number of secondary corridors were developed to address the spatial development plans. However, in accordance with the 2012 CITP, the primary and key secondary corridors should be properly analysed by the IRPTN from a current supply and future demand perspective prior to their inclusion into any implementation plan.

3.5.3 Bus Network

An engagement meeting was held with the six bus operators that operate in the Mpumalanga Province, and the following information was obtained about their operations:

3.5.3.1 Buscor

Buscor serves a total of 80 routes in the Mpumalanga Province. They have 438 vehicles that operate on these routes, in Nelspruit, White River and Malalane. Below are the key routes that they travel on:

Table 3-20: Buscor Bus route information

Route Name	ROUTE NO.	Origin	DESTINATION	No of Operating Vehicles
Nelspruit	01	Makoko	Nelspruit	
	02	Uitkyk	Nelspruit	
	03	Weltevreden	Nelspruit	
	04	Ezwellitsha	Nelspruit	
	05	Pienaar	Nelspruit	
	06	Daantjie	Nelspruit	
	07	Ngodini	Nelspruit	

	08	Elandshoek	Nelspruit	
	09	Kaapsche Hoop	Nelspruit	
	10	Nyamaasaan	Nelspruit	
	11	Matsulu	Nelspruit	
	12	Malelane	Nelspruit	
	13	Barberton	Nelspruit	
	14	Nelspruit	Woodhouse	
	15	Nyamaasaan	Daantjie	
	16	Malekutu	Karino	
	17	Ngodini	TSB	
	18	Siphelanyane	Nelspruit	
	19	Nyamaasaan	Alkmaar	
	20	White River	Nelspruit	
	21	White River	Nyamazaneni	
	22	Gatshwene	White River	
	23	Makoko	White River	
	24	Nyamaasaan	White River	
	25	Karino	White River	
	26	Weltevreden	White River	
	27	Khumbula	White River	
	28	White River	Marathon	
	29	Makoko	Rocky's Drift	
	30	Hlau Hlau	Rocky's Drift	
	31	Matsulu	Kaapmuiden	
	32	Matsulu	Boulders	
	33	Matsulu	Louw's Creek	
	34	Matsulu	Sheba Mine	
	35	Matsulu	New Consort Mine	
	36	Matsulu	Rhineland	
	37	Malelane	Nelspruit	
	38	Matsulu	Nyamaasaan	
	39	Matsulu	Malelane	
	40	Ngodini	Matsulu	
	41	Barberton	Agnes Mine	
	42	Barberton	Jeppes Reef	
	43	Barberton	Jeppes Reef	
	44	Siphelanyane	Ngodwana	
	45	Barberton	Kaapmuiden	
	46	Mpakeni	Nelspruit	
	47	Lupisi	Nelspruit	
	48	My Own	Barberton	

Route Name	Route No	Origin	Destination	No of Operating Vehicles
White River	1	Sandford	Nelspruit	
	2	Nyongane	Nelspruit	
	3	Nyongane	De Rust	
	4	Sabie	White River	
	5	Calcutta	Nelspruit	
	6	Oakley	Nelspruit	
	7	Hazyview	Boschhoek	
	8	Sandford	Nelspruit	
	9	Ga-Tshweni	Nelspruit	

Route Name	Route No	Origin	Destination	No of Operating Vehicles
Malalane	1	Border gate via	Komatipoort	

	2	Border gate via	Komatipoort
	3	Mananga	Komatipoort
	4	Mbuzini	Komatipoort
	5	Umkaya	Komatipoort
	6	Naas	Malelane
	7	Mbuzini	Malelane
	8	Naas	Hectorspruit
	9	Mangweni	Malelane
	10	Jeppes Reef	Malelane
	11	Schulzendaal	Malelane
	12	Magogeni	Malelane
	13	Buffelspruit	Hectorspruit
	14	Jeppes Reef	Malelane
	15	Mgobodi	Malelane
	16	Phiva	Malelane
	17	Jeppes Reef	Hectorspruit
	18	Mgobodi	Hectorspruit
	19	Malelane	Lebombo border gate
	20	Malelane	Nelspruit
	21	Naas	Nelspruit
	22	Jeppes Reef	TSB
	23	Jeppes Reef	Agnes Mine

Buscor highlighted the following challenges:

- The infrastructure poor and is deteriorating rapidly.
- There are illegal operators on the bus routes.
- There is interference from the taxi operators.
- There are many unsubsidised kilometres.

3.5.3.2 Putco

Information was not available.

3.5.3.3 Tilly's

Information was not available.

3.5.3.4 Thembalethu

Thembalethu Bus serve a total of 39 routes in the Mpumalanga Province. They have 20 vehicles that operates on these routes. The Bus service operates in Hlalanikanie, Phola, Mhiuzi Rietspruit and Lynville.

The following challenges were brought up during the engagement with the operator:

- The routes that the buses utilize are generally in very bad conditions.
- There are no road markings along the routes.
- There is constant conflict between the bus and taxi operators on routes that are being utilised.

- There is no bus rank/facility for the operating vehicles.
- There are some bus shelters along the routes.

3.5.3.5 Greath North

The following information was provided:

Table 3-21: Great North Route Information

Route Name	Route No	Origin	Destination	No of Operating Vehicles
Hazyview	1201	Hazyview	Masana Hosp (BBR)	
	1201	Masana Hosp (BBR)	Hazyview	
	1202	Marite Market	Hazyview	
	1202	Hazyview	Marite Market	
	1203	Madras	Hazyview	
	1203	Hazyview	Madras	
	1204	Casteel	Hazyview	
	1204	Hazyview	Casteel	
	1205	Hazyview	Wales	
	1207	Hazeyview	Hoedspruit	
	1208	Hazyview	Njonjela	
	1209	Oakley	Hazyview	
	1209	Hazyview	Oakley	
	1210	Cork	Hazyview	
	1210	Hazyview	Cork	
	1211	Mkhuhlu	Hazyview	
	1211	Hazyview	Mkhuhlu	
	1212	Hazyview	Nola	
	1213	Hazyview	Casa Do Sol	
	1215	Hoedspruit	Mukhuhlu	
	1216	Madras	Hazy view	
	1217	Hazeyview	Thulamahashe	
	1217	Hazyview	Thulamahashe	
	1219	Nola	Cork	
	1218	Somerset	Hazyview	
	1218	Hazyview	Somerset	
	1220	Njonjela	Nola	
	1221	London	Nola	
	1223	Marite Market	Nola	
	1223	Nola	Marite Market	
	1224	Mkhuhlu	Casa Do Sol	
	1224	Casa do Sol	Mkhuhlu	
	1225	Casa Do Sol	Oakley	
	1226	Madras	Casa Do sol	
	1226	Casa Do Sol	Madras	
	1227	Marite Market	Casa do Sol	
	1227	Casa Do Sol	Marite Market	
	1228	Da Gama	Madras	
	1230	Da Gama	Bushbuckridge	

	1230	Bushbuckridge	Da Gama
	1231	Oakley	Da Gama
	1231	Da Gama	Oakley
	1232	Tekamahala	Protea Hotel
	1232	Protea Hotel	Tekamahala
	1233	Madras	Protea Hotel
	1233	Protea Hotel	Madras
	1234	Madras	Mkhuhlu
	1235	Nola	Mkhuhlu
	1236	Da Gama	Hazyview
	1236	Hazyview	Da Gama
	1238	Madras	Nola
	1239	Hazyview	Oakley
	1240	Mkhuhlu	Masana Hosp
	1240	Masana Hosp	Mkhuhlu
	1241	Oakley	Masana Hosp
	1243	Bushbuckridge	Wales
	1244	Arconhoek	Bushbuckridge
	1248	Mkhuhlu	Masana Hosp
	1249	Manyeleti	Bushbuckridge
	1248	Masana Hosp	Mkhuhlu
	1252	Welverdiende	Manyeleti
	1253	Dixie	Arconhoek
	1253	Arconhoek	Dixie
	1254	Thulamahashe	Mkhuhlu
	1265	Wales	Sabie
	1265	Sabie	Wales
	1267	Bushbuckridge	Sabie
	1267	Sabie	Bushbuckridge
	1268	London	Nelspruit
	1270	Lilidale	Nelspruit
	1270	Nelspruit	Lilydale
	1271	Casteel	Nelspruit
	1271	Nelspruit	Casteel
	1272	Oakley	Nelspruit
	1272	Nelspruit	Oakley
	1273	Madras	Whiteriver
	1273	Whiteriver	Madras
	1274	Bushbuckridge	Nelspruit
	1274	Nelspruit	Bushbuckridge
	1277	Hazyview	London
	1283	Madras	Zeederburg Quest
	1283	Zeederburg Quest	Madras
	1291	Bushbuckridge	Wales
	1292	Mkhuhlu	Nelspruit
	1292	Nelspruit	Mkhuhlu
	1293	Oakley	Nelspruit

	1293	Nelspruit	Oakley	
	1295	Agincourt	Hazyview	
	1295	Hazyview	Agincourt	
	1297	Ronaldsey	Nelspruit	
	1297	Nelspruit	Ronaldsey	
	1298	Nelspruit	Marite Market	
	1299	Kiepersol	Oakley	
	1300	Hazyview	Ireach	
	1301	Ireagh A	Hazyview	
	1301	Hazyview	Ireagh A	
	1302	Oakley	Da Gama	
	1304	Casteel	Da Gama	
	1304	Da Gama	Casteel	
	1306	Bushbuckridge	Protea Hotel	
	1308	Agincourt	Kiepersol	
	1308	Kiepersol	Agincourt	
	1311	Wales	Ramalas	

Route Name	Route No	Origin	Destination	No of Operating Vehicles
Graskop	1260	Wales	Graskop	
	1260	Graskop	Wales	
	1261	Graskop	Bushbuckridge	
	1261	Bushbuckridge	Graskop	
	1262	London	Graskop	
	1262	Graskop	London	
	1263	Jim Brown	Graskop	
	1263	Graskop	Jim Brown	
	1264	Matibidi	Graskop	
	1264	Graskop	Matibidi	
	1275	Hazyview	Graskop	
	1278	Graskop	Oakley	
	1305	York Timber	Graskop	
	1305	Graskop	York Timber	

Route Name	Route No	Origin	Destination	No of Operating Vehicles
Bushbuckridge	1242	Dwarsloop	Bushbuckridge	
	1242	Bushbuckridge	Dwarsloop	
	1252	Welverdiend	Manyeleti	
	1252	Manyeleti	Welverdiend	
	1249	Manyeleti	Bushbuckridge	
	1249	Bushbuckridge	Manyeleti	
	1253	Acornhoek	Dixie	
	1253	Dixie	Acornhoek	

	1254	Njojela	Mkhuhlu	
	1254	Mkhuhlu	Njojela	
	1276	London	Bushbuckridge	
	1276	Bushbuckridge	London	
	1307	Marongwane	Bushbuckridge	
	1307	Bushbuckridge	Marongwana	
	1311	Wales	Ramanas	
	1311	Ramanas	Wales	
	1263	Zeerderburg	Madras	
	1235	Mkhuhlu	Nola	
	1210	Hazyview	Cork	
	1256	Madras	Hazyview	

Megabus

Megabus serve a total of 758 routes in the Mpumalanga Province. They have 139 vehicles that operates on this route, as Sasol in Secunda is their main destination. Below are their key routes that they travel on and the number of vehicles on each route:

Table 3-22: Megabus Operations

Route Name	Route No.	Origin	Destination	No of operating vehicles
Bethal		Bethal	Secunda/Sasol/Trichardt/Evander/Kinross	27
Lesile		Lesile	Secunda/Sasol/Trichardt/Evander/Kinross	21
Standerton		Standerton	Secunda/Sasol	3
EMbalenhle		EMbalenhle	Secunda/Sasol	110

The following challenges were brought up during the engagement with the operator:

- The routes that the buses utilise are in very bad condition.
- There is no bus rank/facility for the Megabus operators as they operate from an open field with no facilities provided for buses and commuters.
- There are bus shelters along the routes.
- There are no proper bus stops along the routes.

3.5.3.6 Department of Public Works, Roads and Transport Database

The Department of Public Works, Roads and Transport, Mpumalanga, provided the following information about the bus's status in 2024. Buscor (PTY) Ltd, Megabus & Coach, Putco Ltd, Thembalethu, Great North Transport, and Tilly's Bus Services are the seven (7) interim contracts that the Department is managing:

Table 3-23: Status of Bus Contracts

Bus Operator	Fleet Size	Public Transport Operations Grant Allocation	Contract Type	Area of Operation/ Municipalities	Contract Extension Granted Year
Putco	7	0.5%	Interim	Thembisile Hani and Dr JS Moroka	2026
Megabus	138	10%	Interim	Govern Mbeki	2026
Great North Transport Graskop	10	1%	Interim	Thaba Chweu	2026

Great North Transport	32	3%	Interim	Bush Buckridge and Mbombela	2026
Tilly's	9	1%	Interim	Albert Luthuli and Msukaligwa	2026
Thembalethu	20	1%	Interim	Emalahleni and Steve Tshwete	2026
Buscor	398	82%	Interim	Mbombela, Nkomazi , Bushbuckridge	2026

3.5.3.7 Ehlanzeni

In accordance with the Ehlanzeni DM DITP 2019, bus services are currently managed by the Provincial Government, which is responsible for regulating and controlling bus operations, planning, implementing, and monitoring bus services through interim agreements, and managing bus subsidies. The control, however, lies entirely in the hands of private owners. The municipality has two types of operators, privately owned, state subsidised operators and privately owned, non-subsidised operators. Below is a summary of the bus operators and their total number of operating routes.

Table 3-24: Bus Subsidy Status & No of Routes

Bus Services				
No	Operator	Subsidy Status	No of Routes	Subsidised Routes
1	Buscor	Yes	166	166
2	Great North Transport	Yes	32	32
3	Translux	No	4	0
4	Greyhound	No	3	0
5	Intercape	No	2	0

3.5.3.8 Gert Sibande

According to Gert Sibande DM DITP 2014, research discovered that the Vukanini Taxi Association operates the only bus service from the Secunda taxi rank. The rank provides a formal link between Secunda, Evander, Trichardt, Embalenhle, Kinross, and Leslie.

3.5.3.9 Nkangala

In the Nkangala DM DITP, 2022, it was reported that no information on the buses operating in the district is known, hence the information used to compile the DITP, 2022 was from the Nkangala DM DITP 2008, where it was recorded that 620 buses were operating of which 30 subsidised bus routes were utilised. Information to date available from the Nkangala DM DITP 2008, indicates one known bus facility from Moloto Spar Bus Rank, which is used for commuting from Thembisle Hani Local Municipality traveling to Pretoria for work opportunities.

3.5.3.10 Mbombela CITP Bus Transport

In accordance with the MLM CITP 2012, The bus operators carry the majority of public transport commuters, and this service is provided predominantly by Buscor, a private operator with negotiated contract bus routes. The only other bus operator with contract routes is Great North Transport which is a major operator in Limpopo Province. The bus fleet operating on subsidised routes in the Ehlanzeni District Municipality (EDM) area consists of:

- Buscor 338 buses (in EDM)
- Great North Transport < 15 buses (in EDM)

Buscor officials stated that approximately 260 of their buses operate in the Mbombela Municipal area. Most of the Great North Transport buses also operate in Mbombela. Approximately 75% of the Buscor fleet consists of articulated buses with a capacity of 144 (104 seated; 40 standees). The balance of this fleet comprises standard

buses with a capacity of 90 passengers. Thus, average bus capacity is 127 passengers. It is understood that Great North Transport only operates standard buses in Mbombela.

In the AM peak buses pick up passengers along a set of routes through the townships before travelling through to the various employment area destinations along these routes. Most services are routed directly to their destinations in Nelspruit or White River CBDs.

Distribution services take passengers from there to various final destinations. Many such trips are destined for the higher income residential areas outside Nelspruit CBD where there is considerable service/domestic employment. Others are en route to nearby employment areas located outside of the CBD. Currently, bus service along these distribution routes is free to passengers who use bus on the first leg of their journey.

In the PM peak, buses load at the two major loading points of Nelspruit CBD and White River CBD. There are also a few other minor loading points in the PM peak. The peak buses generally travel to the end of their specific routes, in the residential areas, dropping off passengers along the way. The trip distances from the major suburbs in the eastern townships to Nelspruit CBD range from 20 to 40 kilometres or more, the distance to White River being some 10 km less.

The long-distance buses are operated by:

- Translux
 - Johannesburg to Maputo
 - Johannesburg to Nelspruit
 - Maputo to Nelspruit
- City to City
 - Johannesburg to Maputo
 - Johannesburg to Nelspruit
 - Maputo to Nelspruit
- Citiliner
 - Johannesburg to Maputo
- Intercape
 - Johannesburg to Maputo
 - Johannesburg to Nelspruit
 - Maputo to Nelspruit
- Greyhound
 - Pretoria to Maputo
- Citybug Nelspruit
 - Nelspruit to Durban and Durban to Nelspruit
 - Nelspruit to Klerksdorp and Klerksdorp to Nelspruit
 - Nelspruit to Bloemfontein and Bloemfontein to Nelspruit
 - Nelspruit to Lanseria and Lanseria to Nelspruit
 - Nelspruit to Pretoria and Pretoria to Nelspruit
 - Nelspruit to OR Tambo International Airport and OR Tambo International Airport to Nelspruit
 - Nelspruit to Pretoria/OR Tambo International Airport and OR Tambo International Airport/Pretoria to Nelspruit
 - Nelspruit to Johannesburg and Johannesburg to Nelspruit

3.5.3.11 Non-Motorised Transport Network

The 2022 National Household Travel Survey indicates that over 1.6 million Mpumalanga residents walked to their destination, as a result, walking is the most dominant mode of travelling in Mpumalanga.

a. Ehlanzeni

The DITP completed in 2019 indicates that an overview for this study could not be performed in-depth for the DM owing to onsite disputes. Still, there is a need to introduce non-motorized transportation infrastructure inside the District Municipality. Workers and scholars require designated cycling and walking facilities.

There is a program in the district, Shova-ka-lula. The district-wide campaign Shova-ka-lula, aims to make bicycles more affordable to communities. Although managed at the provincial level, it is carried out by tribal and local municipalities.

b. Gert Sibande

Along the main paths of the Gert Sibande DM, there are little to no facilities for non-motorized users. Pedestrians often have to walk in the road because there are no shoulders provided. In places where shoulders are provided, pedestrians are still exposed to traffic and are at risk of being hit by passing vehicles.

c. Nkangala

Within the district, there are few pedestrian facilities along the routes, forcing pedestrians to walk in the road.

3.5.4 Rail Network

The only passenger service operational in Mpumalanga is between Johannesburg, Pretoria, Mbombela and Kamatipoort for the Shosholoza Meyl PRASA operations. However, in an article produced by Sandiso Phaliso for News 24 on the 3 October 2024, that PRASA has suspended three of four Shosholoza Meyl train routes. The only remaining operational route is the Johannesburg to East London route. The reasons cited in the article from PRASA spokes person Andiswa Makanda are:

- Old unreliable trains.
- Trains consistently breaking down.
- Cable theft and vandalism on routes.

However, the historical trend of this line indicated by PRASA FY12/13 was as follows:

- 119 000 + Passengers per year
- All economy class
- 5th largest route
- 10% of the total PRASA long distance FY 12/13.

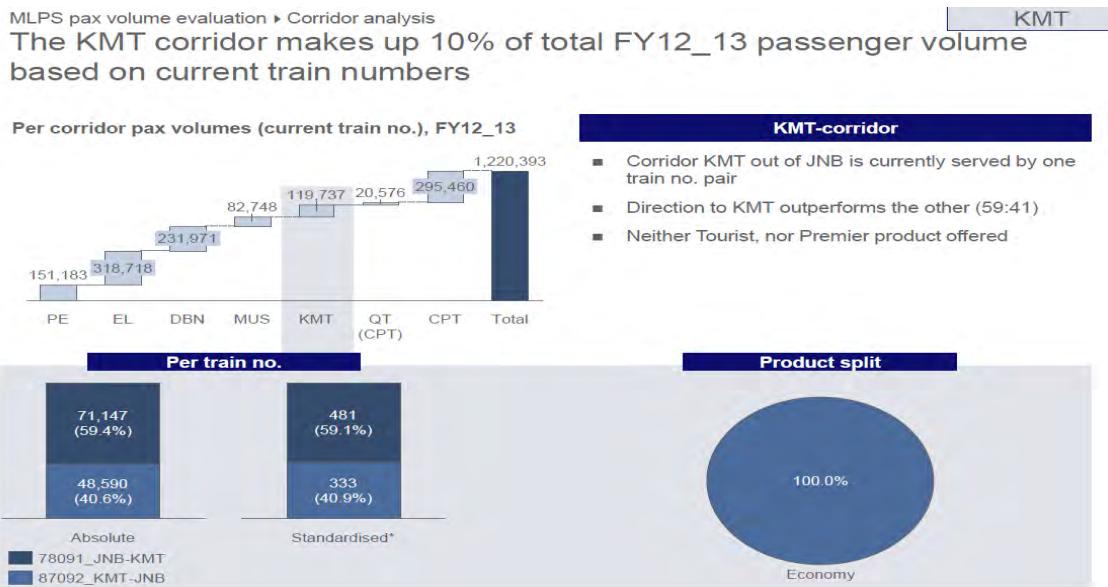


Figure 3-15: PRASA historical trend extract

Moreover, in viewing the trend regarding passenger flows in country done by Pegasys in 2023, There is a definite AADT passenger demand along this corridor of between 367-517 AADT.

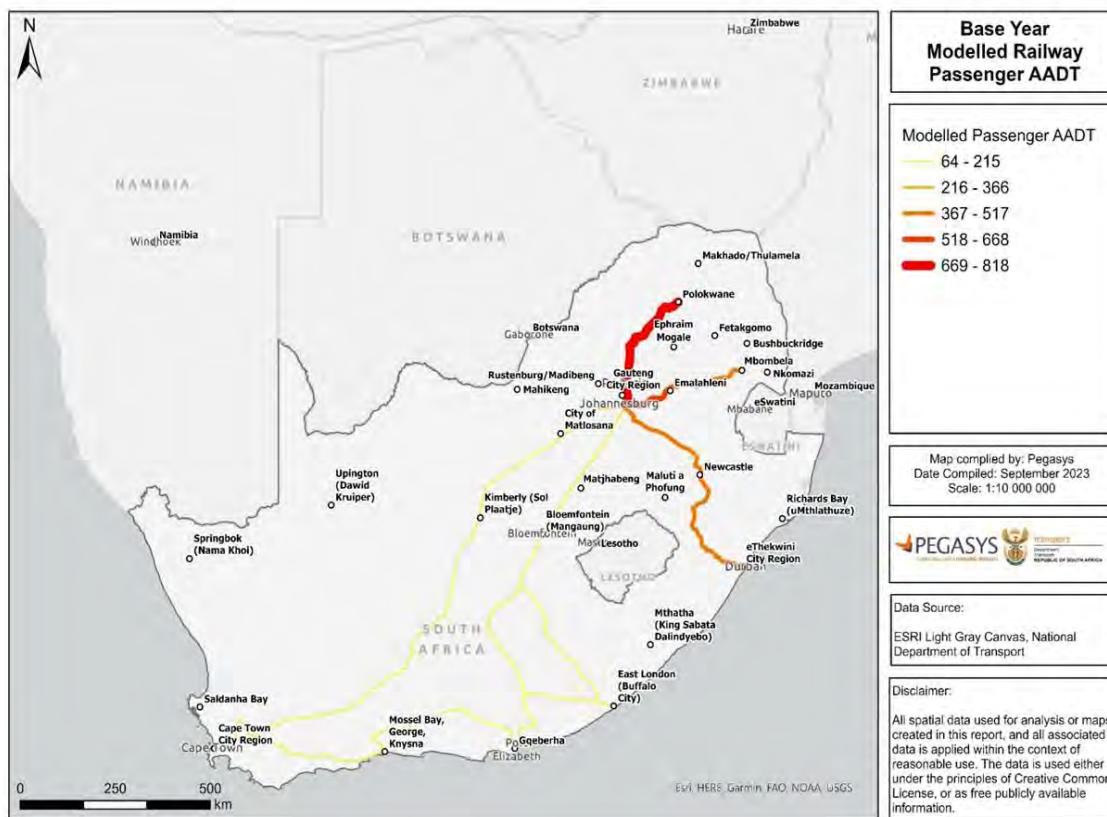


Figure 3-16: Pegasys AADT rail passenger flows

3.5.4.1 Ehlanzeni DITP

The Ehlanzeni DM's passenger rail service is currently administered by the national government and has not been delegated to the provincial or municipal governments. The Passenger Rail Agency of South Africa (PRASA) works as an agent for the National Department of Transport (NDOT) in providing commuter services.

The only service provided by the Ehlanzeni District Municipality is long-distance inter-city service (Shosholoza Meyl). The service runs daily from Pretoria to/or Johannesburg to Komatipoort, via Middleburg and Mbombela, and back.

3.5.4.2 Gert Sibande DITP

The DITP only refers to Freight rail.

3.5.4.3 Nkangala DITP

The only commuter rail service in the district is operated by Shosholoza Meyl, offering a long-distance route from Johannesburg to Komatipoort that passes through Nkangala DM before stopping in Emalahleni. There are no regular short-distance commuter services, such as those offered by MetroRail or PRASA, in the Nkangala DM.

3.5.5 Aviation Network

Mpumalanga has one international airport (Kruger Mpumalanga International Airport); one national airport (Nelspruit (Mbombela) Airport) and 14 other licensed airfields. Ehlanzeni DM is the home of Mbombela LM where the international and national airports are located.

The KMI (Kruger Mpumalanga International Airport) has 32 scheduled and an average of 21 unscheduled operations per day, with around 22000 commuters using the facility monthly for domestic flights to Johannesburg, Cape Town, Durban, Livingstone, Vilankulos and Victoria Falls. Airlink and Federal Airlines are the two identified airliners that operate at this facility (Ehlanzeni DM DITP, 2019), (KMI Yearly Statistics Report, 2023). Figure 3-1 below indicates the total number of passengers (arrival and departure) who visited KMIA monthly over 5 years (2020-2024). The increase in passengers using the facility is evident over five years.



Figure 3-17: Airport utilization over 5-year period

3.5.6 Scholar Transport in the District Municipalities

3.5.6.1 Ehlanzeni DM Scholar Transport

In terms of scholar transport, it needs to be noted Ehlanzeni District Municipality does not have too many farm schools. There is however a number of learners in these rural farming areas that needs to travel long distances to reach their schools.

Buscor and Great North Transport are used by pupils to commute to schools if the school they are enrolled into is at a long distance. Private mini bus taxis are also utilised as a form of scholar transport for pupils within the district. It will be necessary to liaise with the Mpumalanga Department of Education to obtain information on any possible subsidised transport contracts that may be managing within the district municipality.

In accordance with the Ehlanzeni DM DITP, 2019, a study is proposed to conduct a dedicated scholar transport planning study.

3.5.6.2 GSMD Scholar Transport

There are 540 schools in Gert Sibande with a total of 250 000 learners.

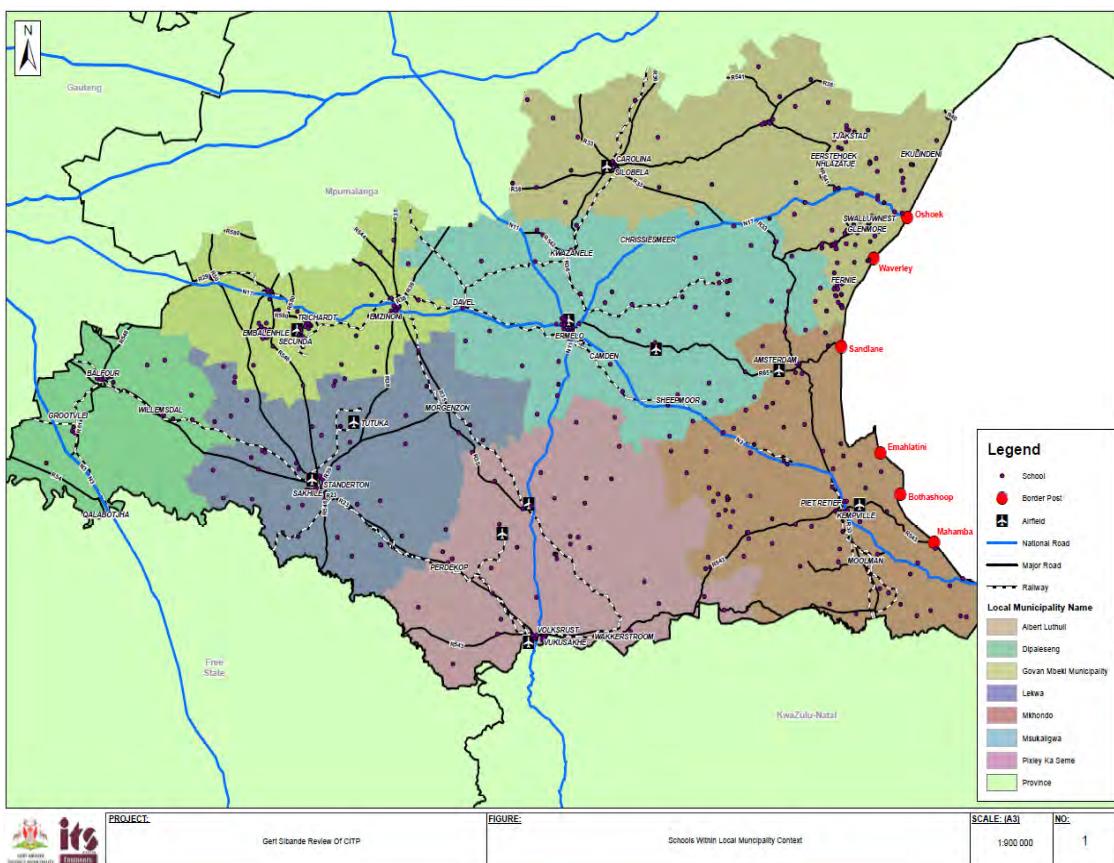


Figure 3-18: Extract number of schools GSDM, 2013 DITP

Table 3-25: Learners and schools per LM

Local Municipality	Number of schools	Number of learners
Albert Luthuli Local Municipality	148	64 662
Dipaleseng Local Municipality	20	8 672
Govan Mbeki Local Municipality	75	56 670
Lekwa Local Municipality	67	25 216
Mkhondo Local Municipality	90	39 743
Msukaligwa Local Municipality	80	32 245
Pixley Ka Seme Local Municipality	50	23 458

In Accordance with GSDM DITP, there are a total of 44 473 scholars that require scholar transport. However, there is an estimated shortfall of around 28000 scholars that require scholar transport.

3.5.6.3 Nkangela DM Scholar Transport

Thirty percent of the population of NDM is between the ages of 5-19. This is considered school going age. This portion of the population is reliant on NMT and public transport. The main mode of transport in the district for scholars is walking at 68%. Taxi, bus and car make up 30.4%. Cycling makes up around 1.7%. Over 90% of the students walking is around 1km or less.

However, it was noted that in the Dr JS Moroka LM, many scholars are walking over 5km due to the expense of public transport.

3.5.6.4 Mbombela Learner Transport CITP

In accordance with the CITP of 2012 for MLM, there is a need to identify the learner transport needs for the MLM. The need for improved learner transport has been highlighted by the IDP public participation process as reflected in the latest MLM IDP. This investigation should also include the issue of all aspects related to road and traffic safety.

3.6 Freight Network in Mpumalanga

Freight is defined as the coordinate bundle of transport and logistics infrastructure and services for movement of goods or cargo from one place to another. It facilitates multi-modal trade and transport flow between major points of production and consumption linking South Africa provincial and global markets. In South Africa, there is no standard limit in size, quantity or type of cargo being transported that qualifies it to be classified as freight.

Mpumalanga province is situated as a region with two neighbouring countries Mozambique and Eswatini. The province's geographic position has subjected it to high volumes of road freight movements of major corridor on the N4 corridor linking Gauteng and Mozambique and N17 corridor linking Gauteng with Eswatini. The N11 traverses the province providing road freight linkage between Mpumalanga and Limpopo.

According to (Department of Transport, National Freight Databank of SA, 2024) the market share between the different mode of freight transport was estimated based on total mass of freight in 2019 through the freight corridor in South Africa, see Figure 3-19 below.

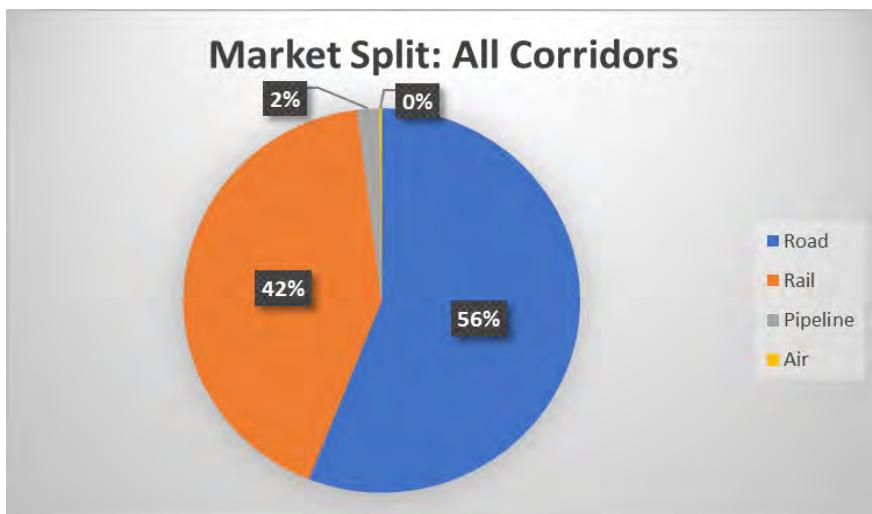


Figure 3-19: Market Split in South Africa

Mpumalanga freight network is important for South Africa freight transport system due to significance industries within the province in mining, agriculture, and energy production. This freight network is vital for both regional and national economic activities, particularly coal mining with the high rise of power demand in the country.

3.6.1 Road Freight

Road freight network support quality of life and the economy. The network that provides the service that individuals and institutions need in the way that the users are able to access the services and reliability of the services. The choice of road as a means of freight transport is influenced by reliability of mode, time to reach destination, safety of goods, and ease of access to collection or delivery destinations of the goods. There are different corridors within the province that will be detailed in this section that are differentiated based on the

different service and importance of the activities that are been on the specific corridors within Mpumalanga province also shown in Figure 3-21 below.

The major road freight corridors through the province are:

- a. **Maputo Corridor (Gauteng to Mozambique)**, the Maputo Development Corridor runs on the N4 from Gauteng to Mozambique via EMalahleni, Middleburg, and Nelspruit, by connecting the main economic centres of the province. This is a link from Gauteng province that produces 40% of South Africa's GDP. The MDC enables importers and exporters from Gauteng and Mpumalanga, also enables to bordering country Mozambique. Industrial and mining goods, as well as agricultural products, especially fruits, move through the MDC. The bulk of the MDC runs through Mpumalanga, which boasts 76% of South Africa's coal mining output and 50% of national coal reserves, with the production centres in Gert Sibande, steel producing areas of Nkangala and agricultural/tourism areas of Ehlanzeni. Some of these goods are exported via the Matola Coal Terminal in Matola Port, Maputo. This corridor cross the Lebombo border post located in Komatipoort.
- b. **Gauteng to Eswatini Corridor**, the Eswatini corridor runs on the N17 from Gauteng to Eswatini via Secunda and Ermelo. This corridor supports the movement of freight, including agricultural products, mining outputs, and manufactured goods linking Gauteng and Eswatini. This corridor cross the Oshoek border post into Eswatini.

The road freight sub-corridors through the province are:

- a. **Ermelo – Mokopane Sub-Corridor**, this corridor runs on the N11 from Ermelo through Hendrina and Middleburg to the Limpopo province. It connects Maputo Development corridor with Gauteng to Zimbabwe corridor between Middleburg (N4) and Mokopane (N1). The corridor supports movements of goods between two inland provinces. It is a critical route for connecting coal mining areas within the province to ports and industrial regions.
- b. **Ermelo – Pongola Sub-Corridor**, this corridor runs on the N2 from Ermelo where it connects with Gauteng to Eswatini corridor through eMkhondo and connects with Pongola. This corridor has the cross-border link into Eswatini crossing southwest of the Golela Border Post.
- c. **Ladysmith – Ermelo Sub-Corridor**, which is a sub-corridor that runs on the N11 and links with the Gauteng – Durban Corridor when the N11 intersect with the N17 in Ermelo. It runs through Ermelo to Ladysmith via Volksrust.

Other important corridors are:

- a. **Moloto Corridor (R573)**, this road links Gauteng and Limpopo through Mpumalanga. The corridor is heavily used as freight network for agricultural products and other goods.
- b. **Tshweleni Corridor (R555)**, which is a secondary transport feeder corridor to the MDC. This corridor link of Middleburg and eMalahleni, this corridor enhances the commercial, industrial, and residential activities along the route section.
- c. **R540/R37 Corridor**, this corridor is important for transportation of mining products to processing plants and export facilities within Mpumalanga.
- d. **R40 Corridor**, this corridor provides the movement of agricultural products, such as fruits and forestry products between Limpopo and Mpumalanga.
- e. **R38 Corridor**, this corridor links Bethal and Barberton with the freight movement of coal and agricultural goods within Mpumalanga.
- f. **R36 Corridor**, this road links Limpopo (Tzaneen) and Mpumalanga via Lydenburg with transportation of agriculture and forestry goods also mining outputs from Mpumalanga to other provinces for exports.

All the different corridors defined above plays crucial roles as a freight network in Mpumalanga economic activities by allowing movements of goods and services within the province and connecting to other provinces, also to the neighbouring counties. Refer to the figure below regarding the national road freight corridors. Significant towns and mines are concentrated along these corridor.

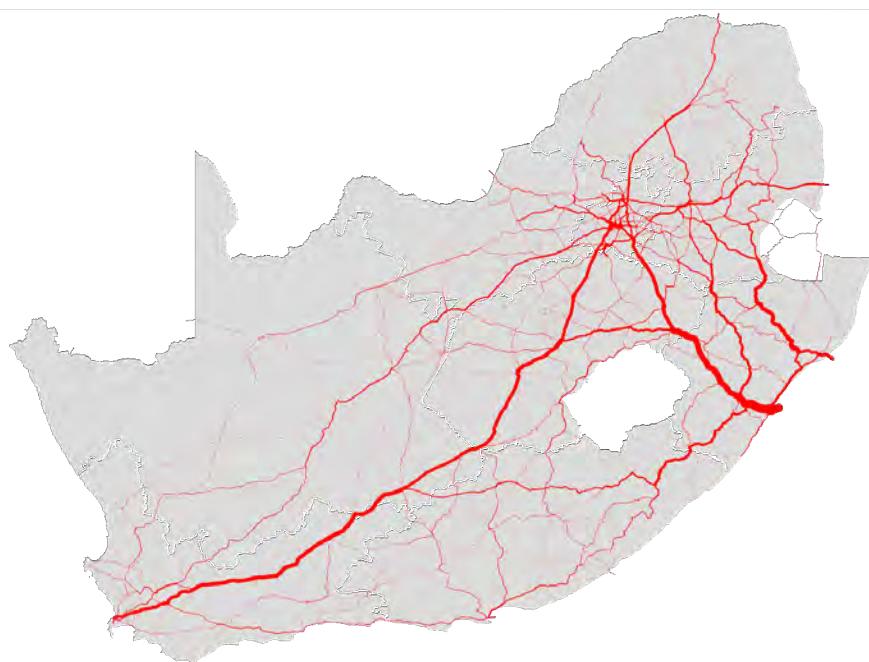


Figure 3-20: Road Freight Corridors in South Africa, GAIN FDM™ (2022)

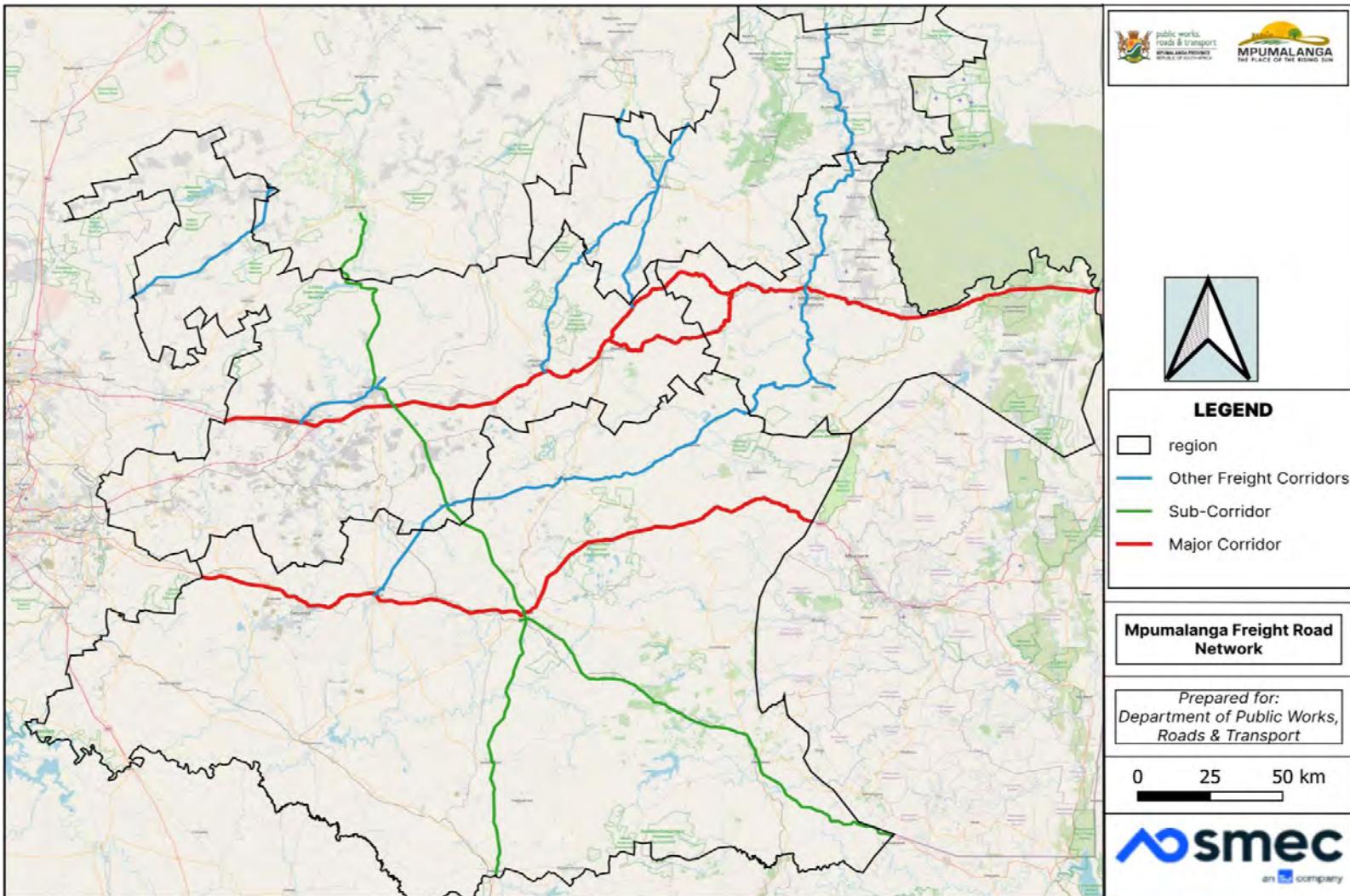


Figure 3-21: Mpumalanga Road Freight Corridors

Provincial Land Transport Framework

Mpumalanga Provincial Land Transport Framework (MPLTF)

Prepared for Department of Public Works, Roads, and Transport –
Mpumalanga Province

SMEC Internal Ref. BG426

17 March 2025

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South African National Roads Agency SOC Limited (SANRAL) has completed most of the resurfacing work on the N17 between Chrissiesmeer and the Oshoek border post. Additionally, 7km of the Moloto Road project in Limpopo has been completed, with construction continuing in both the Mpumalanga sections. Construction will extend to include the entire corridor, covering the Gauteng section as well (*SANRAL Stop Over, 2024*).

Limited data is available on heavy vehicles movements and some counting station information is not available. Table 3-26 reflects the counting stations that are displayed in Figure 3-22 and the heavy vehicles movements counted in 2019 at the various SANRAL counting stations in Mpumalanga province.

The table below shows that the highest ADTT on the Maputo Corridor (N4), where heavy vehicles contributed total traffic of 41% at Komatipoort counting station. This is on Average Daily Traffic (ADT) and Average Daily Truck Traffic counts of 6061 and 2503 respectively. At the Lebombo border counting station the ADTT numbers is 1554 or almost 24% of all traffic.

Table 3-26: Heavy Vehicles at SANRAL Counting Stations (SANRAL, 2024)

Counting Station	Road	ADT	ADTT	% Heavy Vehicles
Piet Retief North	N002	7 367	1 426	19.4
Vereeniging I/C	N003	14 624	5 293	36.2
Grootvlei I/C	N003	12 559	4 045	32.2
Balmoral	N004	18 070	2 665	14.7
Highveld I/C	N004	20 045	3 135	15.6
TRAC Schonland	N004	44 080	3 736	8.5
President Ave	N004	36 617	4 591	12.5
President Ramps	N004	3 792	185	4.7
Middelburg WB WM(MS4)	N004	12 629	1 479	11.7
Middelburg Plaza	N004	25 162	3 566	14.2
Middelburg EB WM(MS3)	N004	12 762	1 554	11.6
Van Dyksdrift IC	N004	23 322	4 802	20.6
N4 Rockdale	N004	18 844	3 858	20.5
Wonderfnt WIM_New	N004	14 742	2 694	18.3
Machado WB Screen	N004	10 429	1 895	18.2
Machadodorp Plaza	N004	10 494	1 943	18.4
Farrefontein	N004	5 222	977	18.7
Ngodwana WIM (MS23)	N004	6 805	1 740	25.6
Kaapmuiden WIM(MS25)	N004	13 706	2 692	19.6
Nkomazi Plaza	N004	11 258	2 471	21.9
Komatipoort EB	N004	5 244	1 692	32.3
Komatiprt WB (MS27W)	N004	817	811	99.2
Lebombo Border	N004	6 547	1 554	23.7
Ermelo North	N011	4 376	1 028	23.5
Middelburg Nrth(MS13)	N011	6 810	592	8.7
Sundra	N012	24 244	4 592	18.9
Delmas I/C	N012	22 617	4 635	20.5
Delmas	N012	22 061	4 732	21.4
Dryden I/C	N012	22 178	4 843	21.8
Argent I/C	N012	21 589	5 068	23.5
Arbor I/C	N012	21 944	5 280	24.1
Kendal I/C	N012	20 883	5 354	25.6
Ogies I/C	N012	23 628	5 978	25.3
Minnaar	N012	24 098	5 218	21.7
Witbank WIM (MS2)	N012	22 244	3 758	16.9

Watermeyer St East	N012	13 364	2 081	15.6
Watermeyerst. West	N012	14 273	2 060	14.4
Leandra Ramp Plaza2	N017	8 029	1 187	14.8
Leandra Ramp Plaza1	N017	8 016	1 171	14.6
Leandra Main Plaza1	N017	7 556	1 124	14.9
Leandra Main Plaza2	N017	7 569	1 127	14.9
Trichardt Plaza 2	N017	9 323	1 021	11.0
Trichardt Plaza 1	N017	9 324	1 012	10.8
Ermelo Plaza 2	N017	4 946	890	18.0
Ermelo Plaza 1	N017	4 946	886	17.9
Standerton	P004	4 110	893	21.7
Greylingstad	R023	3 837	655	17.1
R33 Carolina South	R033	3 796	836	22.0
Stoffberg (MS16)	R033	1 903	209	11.0
TS Amersfoort	R035	2 695	429	15.9
Bethal North WIM	R035	3 942	1 318	33.4
Nutfield (MS6)	R035	4 905	1 318	26.9
MP Welgelegen	P025	694	217	31.2
Hendrina (MS15)	R038	4 161	1 221	29.4
Badplaas (MS22)	R038	3 755	438	11.7
MP Riverloo	P030	5 202	516	9.9
MP Nelspruit North	P017	30 873	1 732	5.6
N3TC Balfour North	P036	1 770	343	19.4
N3TC Balfour South	P036-04	2 458	728	29.6
N3TC Vereeniging	P243-01	1 835	725	39.5
MP Ermelo East	P005	759	53	6.9
MP Rooidraai	P081-01	6 476	1 144	17.7
MP Badplaas South	D225	3 997	326	8.2
MP Verena	P100-01	2 752	159	5.8
MP Kriel	P052-03	8 104	1 960	24.2
Klein Olifantsrivier	R555	14 412	1 701	11.8
Middelbrg East (MS12)	P051-02	5 521	923	16.7
MP Mkhulwane	P255	4 714	410	8.7
Malelane (MS26)	R570	7 915	876	11.1
Midwit NB (MS9)	P127	7 412	1 249	16.9
Van Dyksdrift (MS5)	P127	7 107	2 249	31.7
Wonderfnt R33 (MS18)	P015	3 033	520	17.2
Wonderfnt East (MS19)	D383	1 474	653	44.3
N3TC Dasville	P027-01	1 039	251	24.1

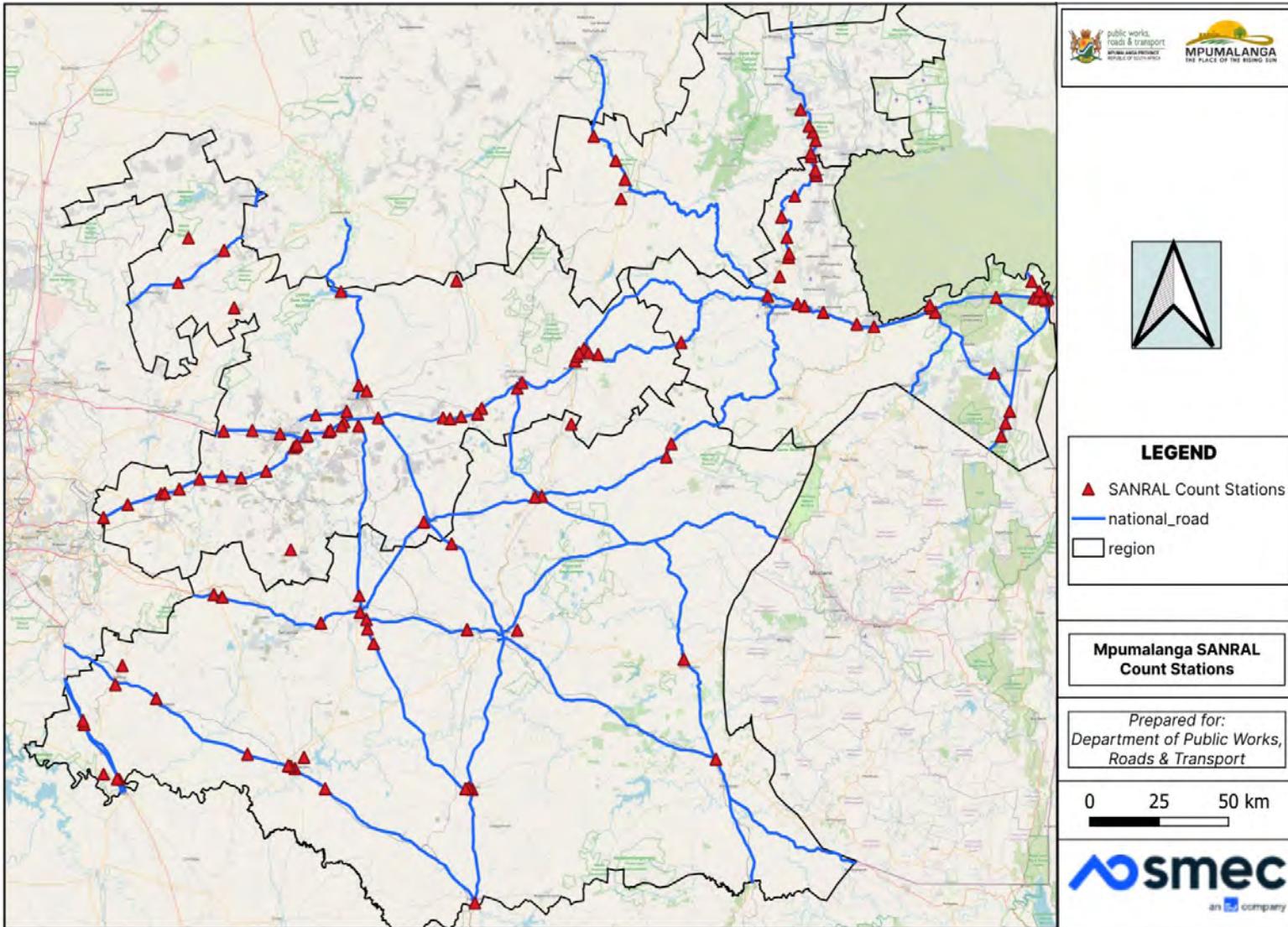


Figure 3-22: SANRAL Counting Station in Mpumalanga

3.6.1.1 Coal Haulage Roads

Coal Haulage by road network is the transportation of coal from mines to the different destination such as power plants, processing facilities and export terminals using road transport mode.

Mpumalanga province is rich in mineral resources such as coal. There are coal-based industries within the province. Thermal coal in Mpumalanga is exported out of the country on the N11 corridor to Richards Bay. With high increase in electricity demand in South Africa due to rapid growth and development of the country, there are bottlenecks on rail services, which has resulted in the coal haulage by road see a significance increase.

Coal haulage routes are utilised for transportation of coal to Eskom's power stations from the mines by road for the purpose of electricity generating electricity see Figure 3-23 and Figure 3-24 below. The rapid increase in coal hauling by road has resulted in significant road condition deterioration to the point where the surfaces are in a very poor condition. This have led the haulers to use alternative routes, which is also causing the alternative route suffering the same degrading to very poor road condition.

Gert Sibande and Nkangala District municipalities are the most affected districts in Mpumalanga, where the district road networks are compromised by the high frequency of heavy vehicles transporting coal to different destinations in the country and for export.

Transporting coal by road is an important part of the coal supply chain, but it requires careful planning and management to deal with logistical, environmental, safety and financial issues.

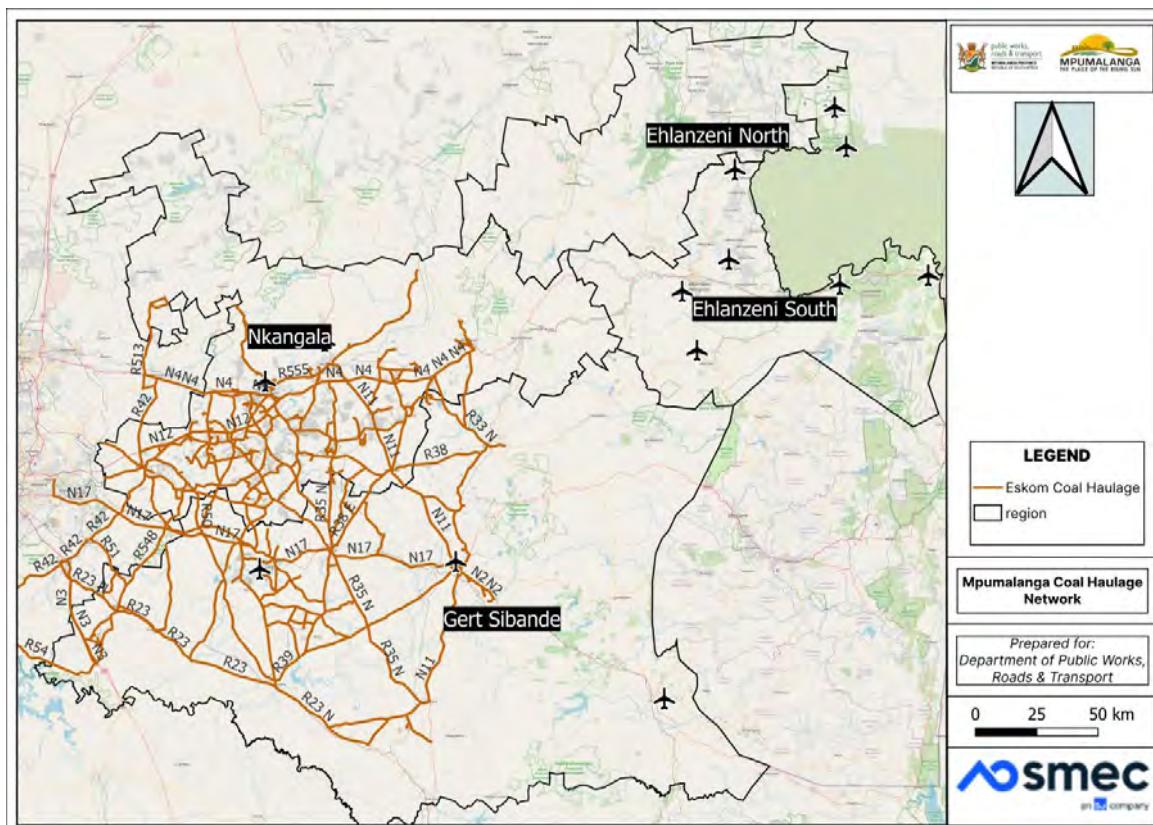


Figure 3-23: Coal Haulage Network with Road No. and Municipalities

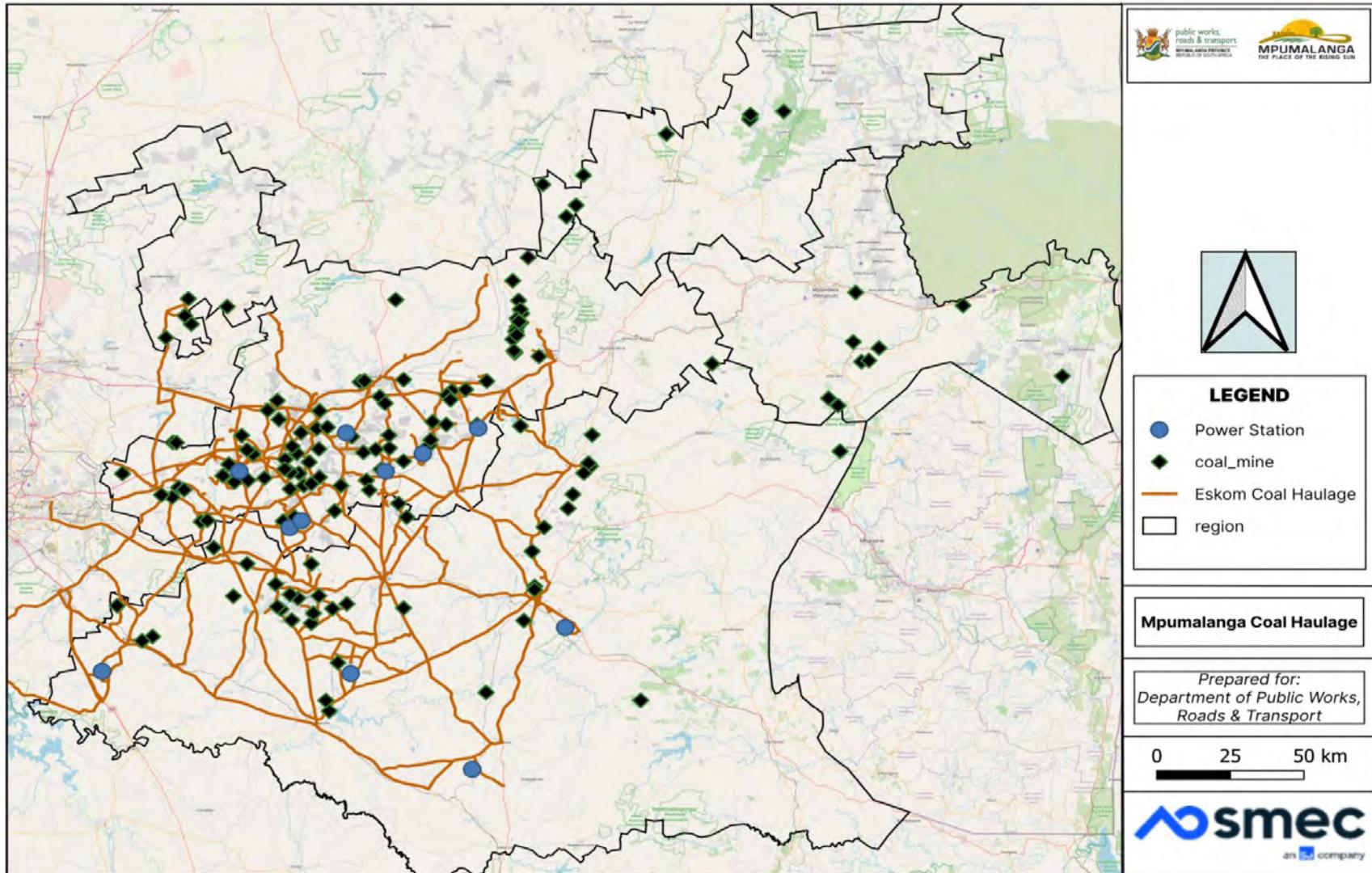


Figure 3-24: Mpumalanga Coal Haulage

3.6.2 Overloading Control

In South Africa overload control facilities are the most important aspect for freight transport, as road freight is mostly used for movements of goods between ports and areas of production and consumption.

Overloading of heavy vehicles is dangerous according to road safety point of view and have potential to damage road pavement and infrastructure such as bridges and building due to movement of overloaded trucks which pose a safety hazard to other road users. For these reasons, road authorities spend considerable amount of money to combat overloading on roads by providing weighbridge stations along strategic or freight routes, see weighbridge in Figure 3-25 below.



Figure 3-25: Middelburg West Traffic Control

According to (Department of Transport, National Freight Databank of SA, 2024), Mpumalanga province recorded highest number of overload control facilities in 2021 with 20 (Including lay-bys) operational weighbridges. These weighbridges are strategically located along the major and sub freight corridors. There are 20 weighbridges in Mpumalanga as shown in Table 3-27 and Figure 3-26 below.

Table 3-27: Weighbridges Location in Mpumalanga

District Municipality	Location
Nkangala	Middleburg East
	Middleburg West
	Vandyksdrift
	Middleburg Witbank
	Middleburg/Bethal
	Hendrina
	Loskopdam
	Middleburg/Hendrina
	Wonderhoek
	Wonderfontein
	Stofberg
	Machadodorp
	Farrefontein

Gert Sibande	Kinross
	Bethal
	Ermelo
	Badplaas
	Ngodwana
Ehlanzeni	Malelane
	Komaripoort

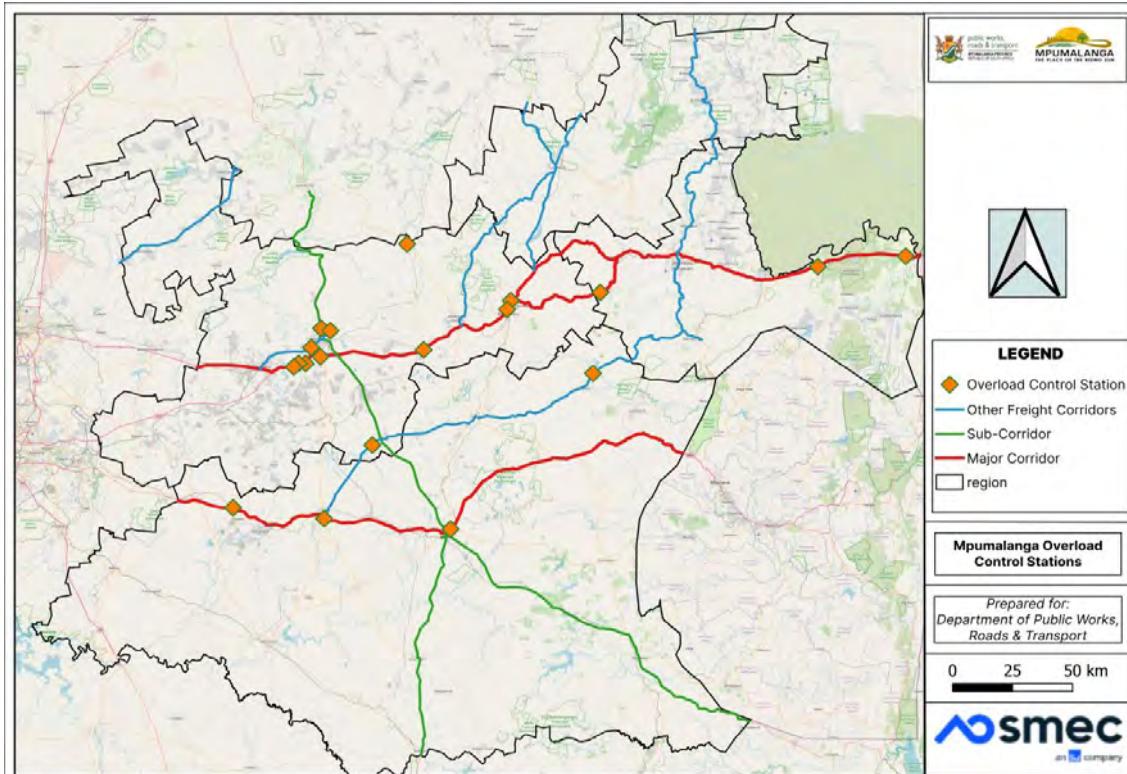


Figure 3-26: Mpumalanga Overload Control locality (Department of Transport, National Freight Databank of SA, 2024)

As heavy vehicles overloading, and road safety continues to be major problems for South African roads despite efforts of law enforcements by the road and traffic authorities. South Africa established the Road Transport Management System (RTMS) in 2005 with the aim of contributing to the road authorities' efforts to address the problem of overloading and road safety on South African corridors. With RTMS as industry-led, Mpumalanga DPWRT states that the responses to major problem of overloading they need to reduce all overloading by special weighing operations to address this challenge on major routes, as well as in problem areas on lesser routes. This is hoped to bring improvement in the fight against the overloading problem.

Unless all parties (Operators and Owners) involved in the loading and movement of goods exercise good corporate governance and take joint responsibility on this issue, the practice of overloading, operating unroadworthy vehicles and exploiting drivers will continue along with the accelerated deterioration of the road infrastructure. According to (Department of Transport, National Freight Databank of SA, 2024), Table 3-28 below shows the statistics of the overloading issue between 2016 and 2020 on the freight corridors in Mpumalanga, which indicates that the overloading problem is increasing over the years.

Table 3-28: Overloading Statistics

Corridor Names	Year	Vehicles Weighed	Vehicles Overloaded	Vehicles Charged	% Overloaded	% Charged

Maputo Corridor (N4)	2016	569 187	116 253	8 291	20.4%	1.5%
	2017	538 060	107 566	7 966	20.0%	1.5%
	2018	816 396	207 586	8 868	25.4%	1.1%
	2019	784 594	213 185	9 212	27.2%	1.2%
	2020	518 026	127 593	6 892	24.6%	1.3%
Gauteng - Eswatini Corridor (N17)	2016	-	-	-	-	-
	2017	-	-	-	-	-
	2018	-	-	-	-	-
	2019	-	-	-	-	-
	2020	-	-	-	-	-
Ermelo - Mokopane Sub- Corridor (N11)	2016	181 713	43 951	1 875	24.2%	1.0%
	2017	158 827	36 597	1 650	23.0%	1.0%
	2018	148 995	32 315	2 043	21.7%	1.4%
	2019	174 617	36 884	1 904	21.1%	1.1%
	2020	108 226	27 406	1 254	25.3%	1.2%
Ermelo - Ladysmith Sub- Corridor (N11)	2016	13 633	2 120	379	15.6%	2.8%
	2017	11 575	1 849	306	16.0%	2.6%
	2018	12 087	2 177	292	18.0%	2.4%
	2019	16 179	3 072	384	19.0%	2.4%
	2020	9 496	1 272	214	13.4%	2.3%
Total Weighed in 2020		635 748	156 271	8 360	24.6%	5.3%

Overloading heavy vehicles in Mpumalanga is visible and it still a major problem on the road networks. To prevent and curb overloading on the roads, the province needs to work together with relevant stakeholders affected by this problem to develop an overloading control strategy. SANRAL particularly endorses the Load Accreditation Programme (LAP), which offers a recognised mechanism to companies to demonstrate their acceptance of responsibility. LAP is chaired by the Road Freight Association (RFA) and represented by SANRAL and representatives from participating industries, as well as the National Department of Transport. It would be beneficial if Mpumalanga DPWRT adopts similar programme in the province.

3.6.3 Rail Freight Network

Mpumalanga Rail network is a crucial element of the country's transportation system with 2 233 km route system and the significant factor for movements of goods and services provincial and inter-provincial to countrywide and beyond country borders. Transnet Freight Rail in Mpumalanga is the biggest contribute to South African economic value.

Figure 3-28 below reflects the rail infrastructure in Mpumalanga, which transport general cargo by rail across the province on the important Rail Freight Network.

The various Railway lines in Mpumalanga are briefly discussed below:

3.6.3.1 Coal Rail Network

Feeder lines from Mpumalanga areas to domestic rail network destinations and Ermelo. Lephalale - Ermelo - Richards Bay is the coal main line. Also Komatipoort to Richards Bay through eSwatini. Figure 3-27 below shows the coal rail network with Mpumalanga province borders.

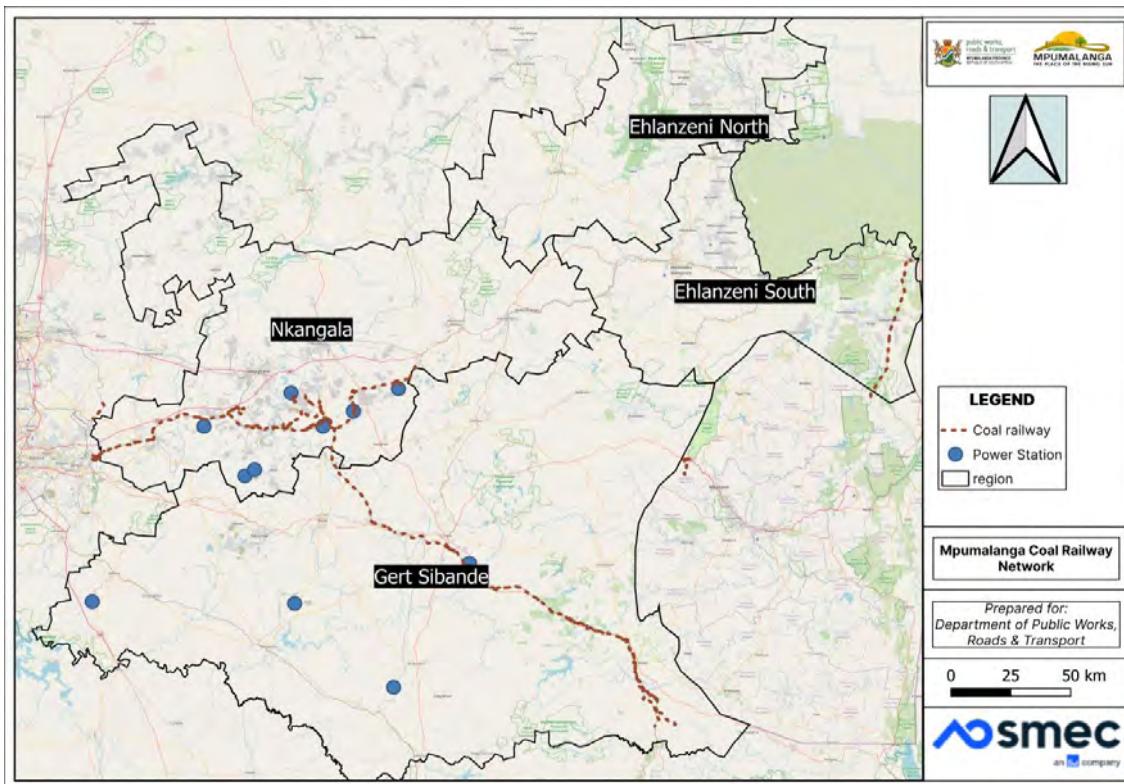


Figure 3-27: Coal Rail Network Mpumalanga

3.6.3.2 Inter-provincial arterial lines

The Maputo Corridor (Gauteng – Komatipoort)

This corridor is 566 km from Pretoria to Maputo in which 383 km of the corridor is in Mpumalanga province borders between Balmoral in the west and Komatipoort (Lebombo border post) in the east. This corridor from Pretoria to Maputo have always been an important freight route for import and export route.

The line carried container traffic that increased and future years could see cross-border traffic increasing from a mere 300 000 tons per annum at present to over 4 - 5 million in the future for coal and sugar according to (MDPWRT, 2024). The line utilise DC system (3 kV) from Komatipoort to Pretoria. In Mozambique used Diesel traction.

There are four branch lines which feed traffic to Maputo Corridor:

- The Roossenekal branch generates iron ore traffic destined to industries in the Witbank area, while titanium is railed to Newcastle in KZN.
- The Steelpoort branch generates chrome and ferrochrome traffic, as well as Andalusite for export at Richards Bay.
- In the Lowveld region, the branch lines to Graskop, Plaston and Barberton serve major forest plantation areas where timber traffic routed to the large paper mill at Ngodwana, to Richards Bay, Gauteng, the North West and Free State.

All this traffic is routed over the mainline, as is the substantial phosphate rock traffic **from Phalaborwa to Richards Bay** (MDPWRT, 2024):

- Kaapmuiden – Mica and beyond to Tzaneen and Groenbult

This railway line is 384 km route originally ran from Komatipoort through Kruger National Park to Newington. 1.8-m tons of rock phosphate traffic are handled by this line including the traffic between Richards Bay and Beit Bridge. The traffic is routed over the Pretoria – Komatipoort mainline between Kaapmuiden and Komatipoort from Eswatini. There is also export fruit traffic from the Lowveld in

Limpopo Province to Maputo. The line is electrified at 3 kV and operated by CTC between Kaapmuiden and Phalaborwa. Diesel traction is used to Tzaneen and Groenbult-junction of the Polokwane - Beit Bridge section of the mainline from Pretoria. The 65 km section from Kaapmuiden to Hazview and Mkhuhlu falls within Mpumalanga Province (MDPWRT, 2024); (Transnet, 2017)).

- Komatipoort - Swaziland border and south to Richards Bay
This line creates a link between South Africa and Eswatini Railways via Mananga on the border of both countries and Richards Bay. In Swaziland itself, a new line from Mpaka was constructed northwards to close the link. It is a direct route for phosphate rock exports from Phalaborwa to Richards Bay. With 70 km of line is within Mpumalanga province borders. The line is single track and powered by diesel traction (MDPWRT, 2024).
- Machadodorp - Breyten - Ermelo (and beyond to Vryheid)
This is a secondary arterial route from Machadodorp and connect with a line from Ermelo, then extended to Piet Retief and Vryheid. The Ermelo to Vryheid section was rebuilt to a heavy-haul standard to handle traffic of the Richards Bay coal line which railed from three on-line collieries. The coal is railed to Richards Bay amount to 2.6-million tons of coal and 130 000 traffic coal directed to Maputo. Forestry traffic is generated in the Carolina area, as well as from the Lothair branch (MDPWRT, 2024).
- Witbank - Ogies - Welgedag – Apex
82km of the 122km long line is within Mpumalanga province. This line is mainly used for coal traffic from Witbank area to different provinces in South Africa. A significant portion of coal traffic is diverted at Welgedag to freight by-pass lines and Sentrarand yard, to avoid congestion in the busy Gauteng Metro area. The coal is transported to important domestic destinations, including Palmford - located between Standerton and Volksrust. According to (MDPWRT, 2024) in 2010 there was over 7 million tons of coal that was railed to power station near the supporting colliery developed major geological problems and cannot be used. A plan was put forward by ESKOM to construct a new railway from a point between Bethal and Ermelo to the plant since large amount of coal traffic is currently on road over this route (MDPWRT, 2024); (Transnet, 2017)).
- Ogies and Wonderfontein - Broedsnyersplaas - Ermelo - Commondale section of the Richards Bay Coal line. This 54 km line between Ogies and Broedsnyersplaas was developed to serve coal mining development in the area. Then was extended to Ermelo to join Richards Bay coal line, "Y" shaped line was formed when new line from Wonderfontein to Broedsnyersplaas was developed. Export coal from mines on the Apex - Witbank line is routed to Ogies and along the line to Ermelo. Substantial volumes of coal are generated at two stations on the Wonderfontein section, which is also used for ferrochrome traffic (MDPWRT, 2024).
- Springs (Gauteng) - Bethal - Ermelo and Estancia
The line is 198 km long with 151 km that is within Mpumalanga, which serves the Highveld agricultural area of the province. This line provides the strategic route traffic from the synfuels plant at Secunda, as well as forestry traffic from eastern Mpumalanga. The line is only electrified over the heavy-haul coal section between Davel and Ermelo and is operated with diesel locomotives stationed at Springs.
- Gauteng to Durban Corridor (Union -Volksrust and Durban)
On this line 176 km of 771 route km on the Germiston - Durban main line falls within Mpumalanga between Spruitrus/Fortuna and Volksrust. This important route is electrified at 3kV dc, is double track throughout and controlled by CTC in Standerton. According to (MDPWRT, 2024), major volumes recorded during the 2007 - 2008 review period included 2 million tons of iron ore from the Northern Province to Newcastle and 1.7 million tons of containerised traffic from Gauteng to Durban. Large amount of transit traffic in both directions and large amount of coal were railed to a power station near Palmford between Standerton and Volksrust.

3.6.3.3 Arterial Branch lines

- Bethal – Morgenzon – Volksrust
The line was developed for agricultural development for 170 km long. According to (MDPWRT, 2024), in 2009 there was several large grain silos along the line, but the route was not operational. Because of this, grain traffic has been forced to road and export opportunities have become limited. The future of this line must be determined as soon as possible. Already, stations have been vandalised and rail has been removed. This is a matter of great concern.
- Balfour North - Grootvlei - Bethlehem (Free State)
This route serves as the interprovincial agricultural route between Mpumalanga and Free State. 42 km of this line is in Mpumalanga province between Balfour North and Vaal River north of Villiers falls. With general freight traffic along this route, the main purpose is to handle seasonal grain traffic originating at

grain silos along the route. This line, also partly within Mpumalanga was originally constructed to move coal and to serve the ESKOM Grootvlei power station [(Transnet, 2017); (MDPWRT, 2024)].

3.6.3.4 Local Lines: Rural Branch lines

- **Kaapmuiden – Barberton**
This line was the first branch line to be developed in Mpumalanga which is 56 km long railway line. The main traffic on this line is freight including supplies to the mining areas. And the line also serves mainly the forestry industry, which developed large plantation along Badplaas road. Traffic originates from Barberton, as a substantial volume of mine prop timber loading point for Free state and North West provinces. Pulpwood loading point was directed to mills loading point at Ngodwana, Richards Bay and Mandini. There was no inbound revenue-earning traffic.
- **Nelspruit - Graskop and Plaston**
The 90 km line was developed between Nelspruit and Sabie to serve the forestry industry, then it was extended to Graskop. Another short branch running from Citrus to Plaston, a distance of 29 km. Both these branches run through very hilly and mountainous country and are steeply graded. Forestry traffic was forwarded from four loading points along the line. All this traffic was delivered to the mill at Ngodwana, a substantial tonnage was sent to various mills and chipping plants at Richards Bay. Mine prop timber was another important traffic generator. There was a major forest fires that devastated the area and it will take many years for the pine plantation to recover from this disaster (MDPWRT, 2024).
- **Buhrmanskop – Lothair**
This 50km branch line was opened to serve the agricultural development. The line has increasingly served the forestry industry as plantations have been developed along its length. Many proposals have been made in the past to link this branch with Swaziland. This became a matter of great interest and debate after the construction of a railway from Mozambique to the iron ore mine at Kadake [(MDPWRT, 2024); (Transnet, 2017)].

3.6.3.5 Planning and Control Centres

- **Ermelo CTC Centre**
An important CTC Centre controls train operations on the northern portion of the Coal line, co-ordinating coal collections from the various collieries and planning train operating requirements for traffic to Richards Bay.
- **Kaapmuiden CTC Centre**
This CTC Cabin controls traffic from Waterval Boven to Komatipoort, and from Phalaborwa to Kaapmuiden.
- **Nelspruit Customer Service Centre**
A Transnet local area customer service manager operates from the old Nelspruit station. He looks after Nelspruit customers, as well as those on the branches and to Steelpoort.
- **Ogies CTC Centre**
This CTC cabin controls traffic on the section from Welgedag in Gauteng Waterval Boven, as well as traffic to Ermelo.
- **Standerton CTC Centre**
This CTC cabin controls traffic on the Natal Main Line (Natcor) from Union to Volksrust.

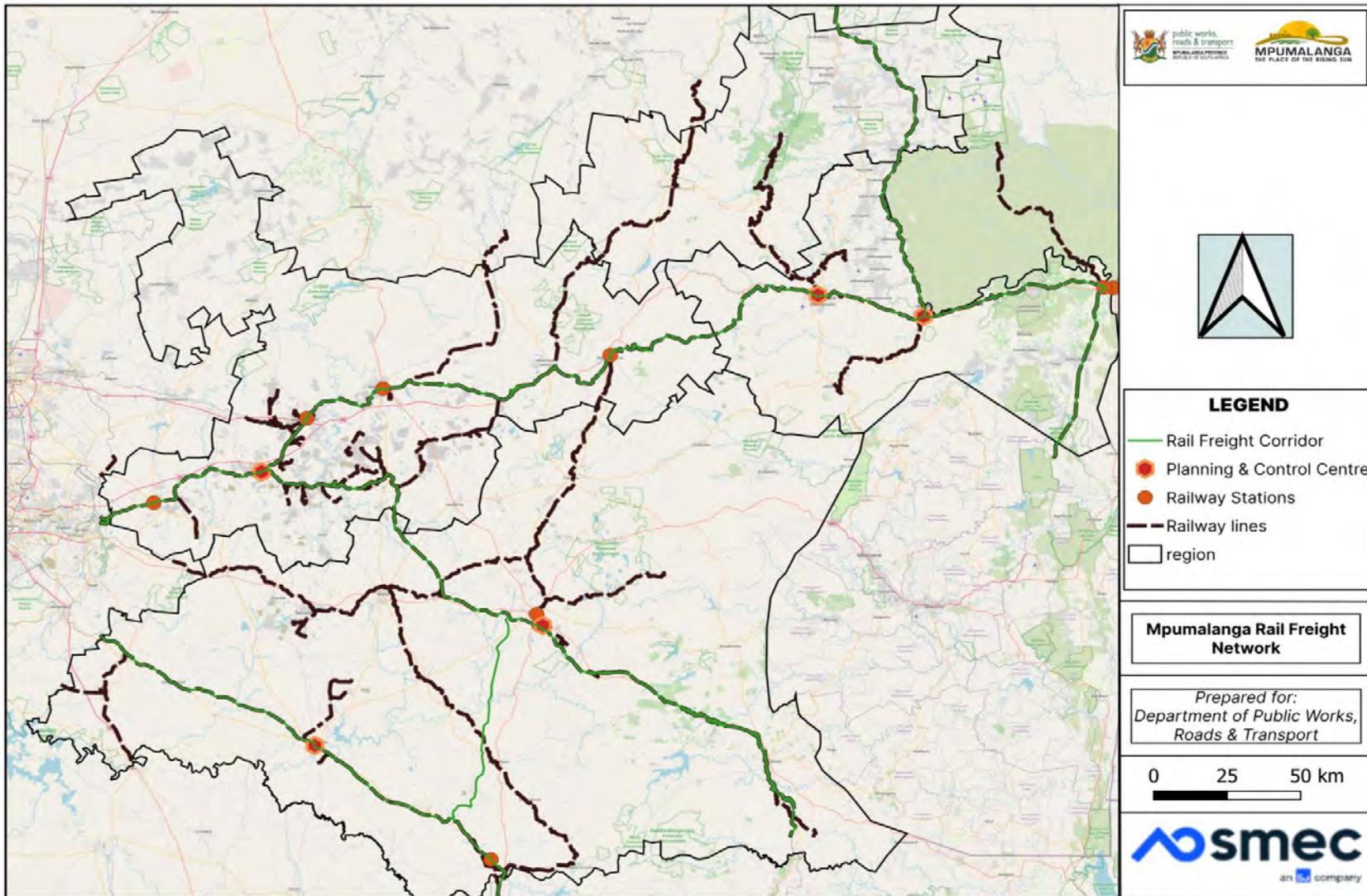


Figure 3-28: Mpumalanga Rail Freight Network (Department of Transport, National Freight Databank of SA, 2024)

3.6.4 Intermodal Facilities

The railway network system consists of railway lines that are the freight movements network, rail yards, and terminals that road freight transport transfer goods and services to the rail transport. In Mpumalanga there are two existing intermodal facilities that are located to optimise the rail network system.

Intermodal facilities are important for cost efficient supply chain and ensure that the road and rail infrastructure is adequate for future growth. It handles commodities, such as containers and bulk minerals that are consolidated at specific source and distributed to local and international markets.

Existing main Intermodal facilities in Mpumalanga:

- Middleburg facility
This facility is operated by private company for container loading and off-loading facility at the east end of the station. Majority of products loaded at this facility are from the stainless-steel producer that are transferred from the road freight transportation.
- Mbombela intermodal facility
This facility has one of manganese processing plants load containers at the Transnet yard facility. It also receives containers and transferred to road freight transportation for final delivery.

The two existing facilities in Mpumalanga in their current form may not be adequate to accommodate the future growth capacity which can be due to rail network system bottleneck, or because terminals may not be strategically located to serve the current and future rail system requirements.

3.6.5 Aviation Freight

Mpumalanga DPWRT as the provincial body responsible for all transport operations. The freight aviation is the aviation component that requires significant work. This section covers air transport facilities in Mpumalanga where significant freight is being ferried regularly.

Kruger Mpumalanga International Airport is the official port of entry for Mpumalanga Province. The airport is situated within reasonable driving distance from both Mbombela and White River and in proximity of many scenic, heritage and conservation sites.

KMIA is an approved facility with a runway able to support such aircraft as Boeing 747 and AIRBUS series aircraft. Major domestic destination includes Johannesburg, Cape Town, and King Shaka (Durban) handling 32 scheduled and an average of 21 unscheduled movements daily. Flights to Vilankulos in Mozambique are also available. Approximately 22 000 people use the facility every month. The following airliners operate from the facility:

- Airlink Airlines
- British Airways (Comair Limited).

Kruger Mpumalanga International Airport is currently the only institute where air freight data was made available. There are several airfields within the province where there is possibly air freight movement but since they are private, the information is kept confidential (*Mpumalanga Province Freight Data Bank Aviation Infrastructure, 2024*).

3.6.5.1 Aviation Freight Infrastructure

Air facilities in Mpumalanga for active freight service centre and their operational volumes. There are 23 aviation facilities available in Mpumalanga. Contact with KMIA management was made to establish their current air freight operations and future plans at their facility. Both public and private facilities were considered because they form an integral part of the aviation transport system.

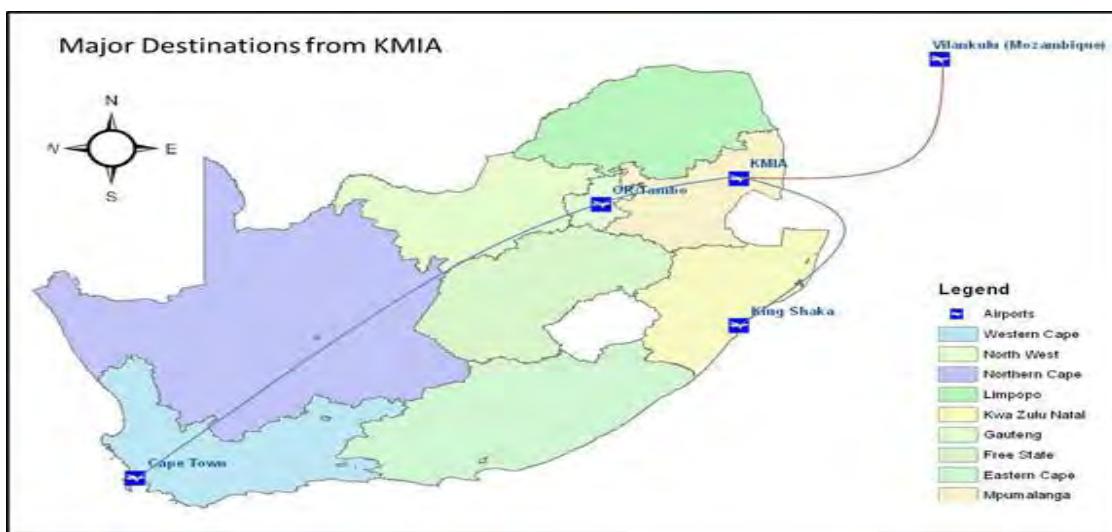


Figure 3-29: Various Destinations served by KMIA.

3.6.5.2 Operations

Aviation freight offers speed freight movement compared to other means of freight transport and advantageous to some products, such as high technology and perishable goods.

Airlink Cargo offers direct air freight transport service from KMIA to approximately 36 destinations in Southern Africa, with 17 Airports in South Africa and 18 Airports in Southern Africa, and to numerous airports around the world using their strategic partners (KMIA, 2024).

3.6.6 Pipeline Freight

Pipeline transport is for movement of goods through the pipeline networks, which provides necessary support for the cargo concerned and guide the load transported. In most cases pipeline network transport include liquefied commodities like petroleum and gas products over varying distance (Department of Transport, National Freight Databank of SA, 2024).

Pipeline network in South Africa is operated and monitored by Transnet formerly known as Petronet that manages almost all pipeline freight in South Africa, with the exception of a pipeline owned and operated for crude oil private companies.

3.6.6.1 Pipeline Freight Infrastructure

The pipeline network in South Africa covers over 3 000 km between Durban and Gauteng, which also covers five other provinces. The network moves a diverse number of products across its alignment. According to (Dot, 2007) Pipeline network need greater level of attention and analysis to be developed to bring it into the freight transport policy mainstream.

Figure 3-30 below shows the existing national pipeline network and the proposed future pipelines plans in South Africa including private owned pipelines for liquefied commodities and gases. There is a major gas pipeline named the ROMPCO pipeline: This pipeline is 865 km pipeline from Temane in Mozambique to Secunda in South Africa is jointly owned by Sasol, the Mozambique government and the South African government. There is a proposed Maputo refine fuels pipeline proposed to pass through Mpumalanga. Furthermore, there is a proposed Gas pipeline between Secunda and Richards Bay.

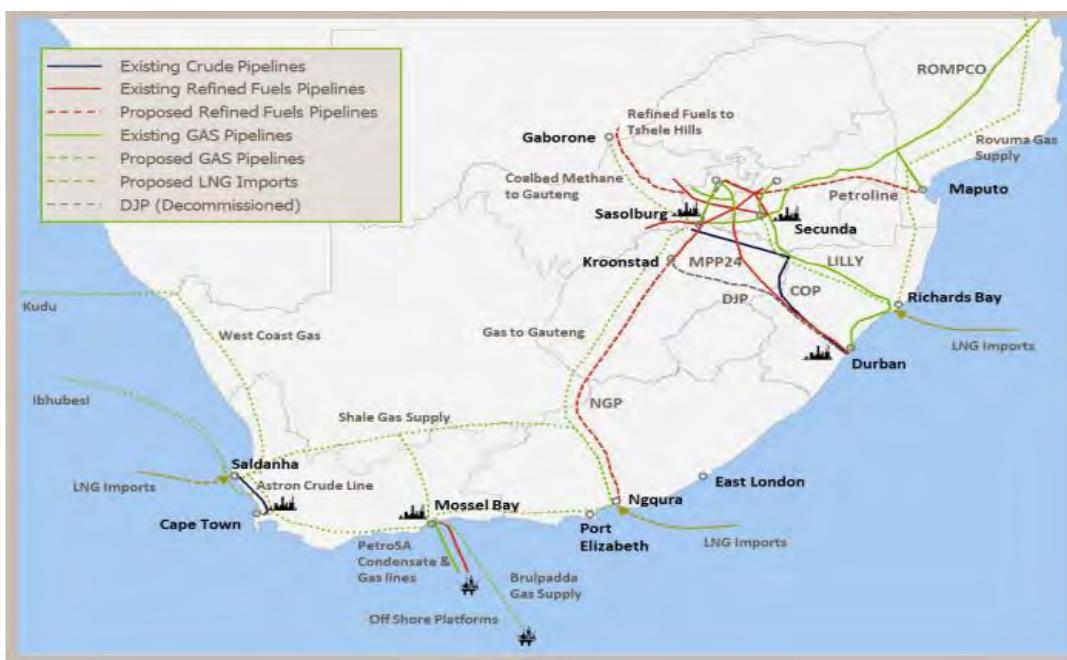


Figure 3-30: National Oil and Gas Pipeline Network

The network also comprises of a tank farm at Tarlton with large capacity. This facility is used for storage and distribution of liquid fuels into Botswana. Regarding the Transnet gas pipeline: This pipeline originates from Secunda to Durban via Empangeni with take-off points at Newcastle and Richards Bay and all along the route, see Figure 3-31. This route us called Lilly pipeline: Transnet owns this 600 km pipeline from Secunda to Durban. Sasol pipelines: Sasol owns several gas pipelines originating in Secunda and reaching destinations such as Johannesburg, Ekurhuleni, Pretoria, Sasolburg, and Emalahleni.



Figure 3-31: Transnet's Oil and Gas Pipeline Network

3.6.6.2 Operations

The operations of the pipeline network within Mpumalanga province for primary commodities and associated volumes handled.

According to (MDPWRT, 2024) the operations are as follows:

- Refined and synthetics conveyed by a 440 m³ hour/12" pipeline;
- Commodities: petrol, diesel and aviation turbine fuel;

Crude Oil conveyed by pipelines with varying diameters such as:

- Vrede - Secunda: 18";
- Secunda - Kendal: 20".

Avtur conveyed from a 6" aviation pipeline from NATREF Coalbrook via Meyerton to OR Tambo and Gas conveyed via plant at secunda to Durban via Standerton, Volksrust, Ingogo, Scheepersnek, Mahlabathini and Empangeni.

There are visible improvements in both safety, environment and security measures within the operations and management of the entre unit (MDPWRT, 2024).

3.7 Cross Border

Mpumalanga province shares its borders with two countries Mozambique and Eswatini. To allow movement of people and trade to flow between Mpumalanga and these two countries several border posts are provided along the national corridors, provincial and escape routes.

Mpumalanga province is linked to Mozambique through the Lebombo port of entry. The province is linked to Eswatini through Oshoek and Ngwenya, Waverley and Lundzi, Nerston and Sandlane, Houdkop and Sicunusa, Bothashoop and Gege, Mahamba, Mananga, Jeppe's Reef and Matsamo, and Jossefdal and Bulembu border posts. Lebombo and Oshoek are part of top five busiest borders in South Africa, that handled more than 60% of total freight traffic.

Kruger Mpumalanga International Airport is also another cross-border link of Mpumalanga with continental and global countries.

3.7.1 Cross-Border Road Transport Agency (C-BRTA)

C-BRTA has been developed to improve the cross-border operational flow of passengers and freight transport operators by the road transportation mode.

The agency operates as interstate agency to reduce constraints for road transport operators by regulating the market access and managing the operation on cross-border transportation with the SADC region.

3.7.2 Passenger Movement Volume passing through South African Borders.

This explores the patterns of people's movements between Mpumalanga and neighbouring countries eSwatini and Mozambique. Traffic analysis include private and public transportation. The information used for this section is sourced from StatSA Tourist data for arrivals and departures through border posts.

3.7.2.1 Volume of people

The movement arrivals and departures of people across Lebombo and Oshoek border posts spanning from 2012 to 2023 is provided in Figure 3-32 below.

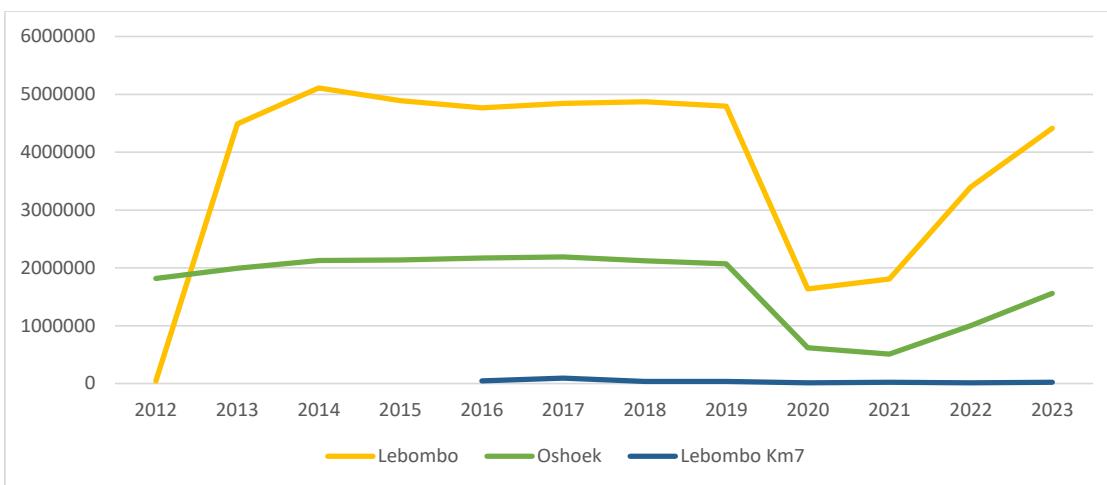


Figure 3-32: Volume of Travellers across Lebombo and Oshoek Border post.

The figure above provides trends on how demand was growing or declining for the past ten-year period. The data shows varying trends across the two borders, with a pattern showing decline during the pandemic years (2020 and 2021) followed by recovery post-pandemic 2022.

Oshoek Border Post

Travellers that used the Oshoek border post are made up by 29.4% of South Africans of the total volume of people across this border post with foreigners on 70.6%.

Figure 3-33 below present the breakdown of arrival and departures at Oshoek border post, the arrivals are averagely at 51% for the past 10 years with departure remained stable at 49–50% over the years. The split between arrivals and departures at Oshoek has remained almost even over the years.



Figure 3-33: Travellers Departure and Arrivals at Oshoek

Reasons for Crossing Oshoek Border Post

Foreigners visit South Africa through Oshoek border post have different reasons for entering the country with majority of visitors cross the border for holiday purposes., this is followed by those who travel for work, business, and study purposes as distributed in Figure 3-34 below.

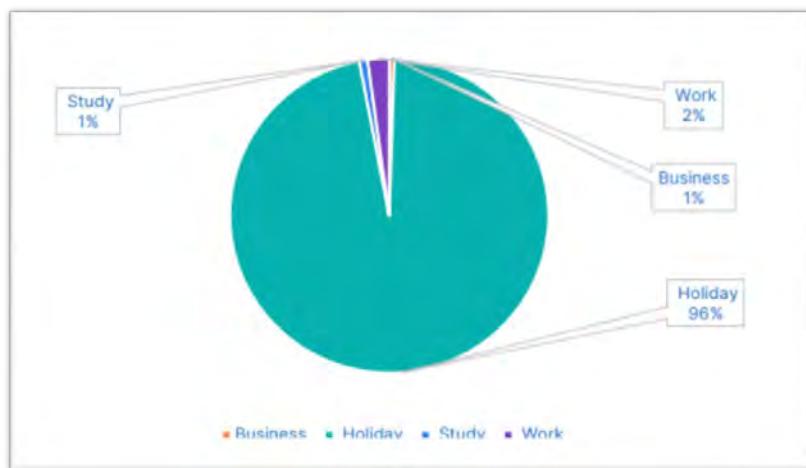


Figure 3-34: Purposes for crossing Oshoek border.

Lebombo Border Post

Travellers across Lebombo according to citizenship, South Africans make up 28% of the total volume of people moving across the Lebombo border post, while foreigners make up 72% total volume.

Figure 3-35 below present arrivals and departures records at Lebombo border post. The percentage of arrivals at Lebombo has generally increased from 0% in 2012 to 55% in 2023, while the departures has decreased from 100% in 2012 to 45% in 2023.



Figure 3-35: Travellers Departure and Arrivals at Lebombo

Reasons for crossing Lebombo Border Post

Travellers are visiting South Africa through the Lebombo border post for different reasons. On average, 97% of visitors entered for holiday purposes, while the remaining 3% travelled for business based on the stats obtained from (SMEC, 2024).

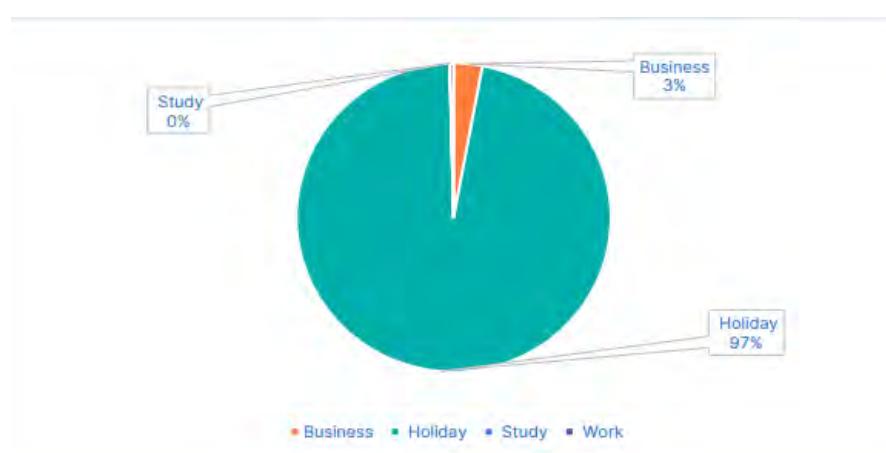


Figure 3-36: Purposes for crossing Lebombo border.

3.7.3 Cross-Border Trade Volumes and Values Passing through South African borders.

Most cross-border movements in the South Africa takes place in road vehicles. Currently Mpumalanga have ten official border posts that are connected to Mozambique and eSwatini, six of these border posts are utilised for commercial purposes.

3.7.3.1 South Africa's Trade with eSwatini

eSwatini is the small country in the SADC region. There are five commercial border posts between eSwatini and Mpumalanga province. Commercial border posts are:

- Jeppes Reef /Matsomo border post.
- Mahamba border post.
- Mananga border post.
- Nerston /Sandlane border post.
- Oshoek /Ngwenya border post.

Table 3-29 reveals the total exports and imports values in monetary terms that passed through South Africa's border posts in the Mpumalanga province between 2019 and 2020.

Table 3-29: South Africa/eSwatini Exports and Imports Trade operations

Border Posts	EXPORTS		IMPORTS	
	2019	2020	2019	2020
Jeppes Reef/ Matsomo Border Post	R 413 668 058	R 403 950 426	R 187 254 697	R 162 986 504
Mahamba Border Post	R 933 254 105	R 993 298 870	R 669 690 665	R 666 153 681
Mananga Border Post	R 669 727 131	R 584 997 371	R 673 333 078	R 808 797 387
Nerston Border Post	R 140 776 685	R 39 841 098	R 163 248 497	R 28 835 319
Oshoek Border Post	R 11 342 206 434	R 11 244 520 255	R 12 532 613 136	R 12 190 200 198

From trade values data Oshoek Border posts recorded the highest exports and imports value of all five commercial border posts link to eSwatini between 2019 and 2020 with 1% decrease in exports while there is 3% decline on imports value.

Table 3-30 below shows the summarised South Africa's total exports and imports through all six borders posts that link to eSwatini for 2019 and 2020. The data shows the total volume of goods recorded at the border posts.

Table 3-30: South African Exports and Imports (value and volume) to eSwatini

South Africa -eSwatini	Value (Mpumalanga Borders)		Volume (incl. KZN Border)	
	2019	2020	2019	2020

EXPORTS	R 13 499 634 432	R 13 266 610 040	1 661 406 525	1 872 923 695
IMPORTS	R 14 226 142 092	R 13 856 975 109	1 618 320 275	1 398 955 135

From the recorded data the exports between 2019 and 2020 that passed through these borders shows decrease of 4% in values, while there is an increase in volumes exported to eSwatini by 13% of exported pieces. The imports value through these border posts declined by 4% between these two years, while the total volumes imported from eSwatini shows the decline by 14% on the volume of imported pieces of goods.

The results of recorded data of imports and exports shows that South Africa and eSwatini have a good trade balance. During the year shown on Table 3-30 the decline was mainly driven by the measures of the Covid-19 imposed by SADC to prevent the spread of the pandemic which restricted the movements of people and goods between countries.

Table 3-31 below present that from 2019 to 2022, eSwatini has consistently been the top trading partner through Oshoek border post, with the highest imports falling into two categories: Cosmetics, Toiletries and Beverage Syrup, and Sugars and Sugar Confectionery.

Table 3-31: Commodities with highest trade value transported through Oshoek (*Source: SARS*)

Year	Imported Commodity with Highest Customs Value	Imported from	Exported Commodity with Highest Customs Value	Exported to
2019	Sugars and sugar confectionery	Eswatini	Vehicles and accessories	Eswatini
2020	Cosmetics, Toiletries and Beverage Syrup	Eswatini	Vehicles and accessories	Eswatini
2021	Sugars and sugar confectionery	Eswatini	Catalytic Converters, Computers and Mechanical Appliances	Eswatini
2022	Sugars and sugar confectionery	Eswatini	Vehicles and accessories	Eswatini

3.7.3.2 South Africa's Trade with Mozambique

Mpumalanga province in South Africa share the border with Mozambique through Lebombo border posts along the Maputo development corridor. Ressano Garcia/ Lebombo border post is the main border crossing where the Maputo corridor highway and the railway cross the border.

Table 3-32 below shows the total exports and imports in monetary terms and quantities moving via Ressano Garcia/ Lebombo border post between 2019 and 2020.

Table 3-32: South African exports (value and volume) to Mozambique

Lebombo Border Post	Value		Volume	
	2019	2020	2019	2020
EXPORTS	R 55 590 584 682	R 53 560 101 250	16 607 593 231	13 604 225 043
IMPORTS	R 4 279 582 967	R 4 128 335 826	618 613 563	568 427 925

The total recorded data at the Lebombo border post for exports value decreased by 4% between this 2years with the exported volumes also declined by 16% pieces of goods. Total imports processed declined by 4% of value, the volume of processed imports declined by 8% of pieces of goods exported by Lebombo.

The trade between South Africa and Mozambique favours South Africa, Table 3-32 shows that South Africa exports more goods and services to Mozambique than it imports from Mozambique. The decline in inter-trade in 2020 were mainly driven by border post closures that targeted the movement of people and non-essential goods across inland borders.

Table 3-33 presents the commodities with the highest customs values traded across the Lebombo border post from 2019 to 2022. During this period the top commodity exported to Mozambique are Ores, and imported commodities are prepared feathers.

Table 3-33: Most valuable commodities transported through Beitbridge border post (*Source: SARS*)

Year	Imported Commodity with Highest Customs Value	Imported from	Exported Commodity with Highest Customs Value	Exported to
2019	Prepared feathers	Mozambique	Ores	Mozambique
2020	Prepared feathers	Mozambique	Ores	Mozambique
2021	Prepared feathers	Mozambique	Ores	Mozambique
2022	Prepared feathers	Mozambique	Ores	Mozambique

3.7.4 Movement at Border Posts Summary

3.7.4.1 Movement of People

Table 3-34 depicts movement of people at Oshoek and Lebombo border posts in Mpumalanga province. The table present the average volume of visitors from 2009 to 2022. The associated border post was inferred from an analysis of customs values at the border post, as well as travel distances and displays the Average Daily Traffic (ADT) of light vehicles closest to these borders.

Table 3-34: Summary of Passenger Movements (*Source: SARS, Stats SA and SANRAL*)

Country	Associated border post	Average volume of Visitors	ADT (Light Vehicles)
Mozambique	Lebombo	1 015 865	6 556
eSwatini	Oshoek	740 522	3 203

From the table above it can be observed that the highest volume of people is crossing at Lebombo border post between South Africa and Mozambique. The primary reason for travellers entering South Africa through Oshoek and Lebombo border posts is for holiday purposes, making up more than 96% of the volume of visitors.

3.7.4.2 Movement of trade

From the trends in values and volumes of goods at each border post, it can be inferred that eSwatini and Mozambique conducts their imports and exports via road carries out the majority of their trade through one designated border.

This may be summarised as:

- Lebombo: Mozambique
- Oshoek: eSwatini

The peak months in monetary value in and truck traffic for Lebombo is summarized in Table 3-35 below:

Table 3-35: Summary of Trade Movements (*Source: SARS, StatsSA and SANRAL*)

Border Post:	Associated country:	Peak Month in Monetary Value	Peak Month in Truck Traffic
Lebombo	Mozambique	April – July and October	October – December

The peaks in truck traffic do not coincide with the months that have high monetary value of trade. High customs values are associated with the trade of Mineral Products commodities. Months with peak truck traffic involve the trades of commodities such as Vegetables, Machinery, and Foodstuffs. The monetary value does not directly impact the traffic volume at the border posts whereas it gives the understanding relationships of trade and economic drive.

The recorded truck traffic includes empty trucks that are completing their return journey. This implies that the presence of truck traffic does not necessarily indicate the occurrence of trade.

3.7.5 Cross-Border Challenges

According to (C-BRTA, 2022) the trade between South Africa and neighbouring countries has increased in the recent years. Lebombo border post between Mpumalanga and Mozambique has double the traffic. There is unavailability of data on cross-border transport movements, which has resulted in the following challenges:

- Inability of the C-BRTA to provide updated information to the Minister of Transport, road transport operators, and industry role players on trade and traffic movements moving through commercial borders into, and out of South Africa.
- Restrict the participation of the C-BRTA in infrastructure planning and development to better respond to the needs of the road transport industry.
- Failure of the C-BRTA to plan appropriately for activities relating to border operations (law enforcement inspection and traffic counts).

3.7.6 Facilities per port of entry

The following facilities per port entry were noted:

- Department of Home Affairs
- South Africa Police Service
- South Africa Revenue Service

3.8 Integrated Public Transport Networks

There are two planned IPTN in Mpumalanga. These are the Mbombela and the NDM IPTN plan.

The Mbombela IPTN has been suspended by the NDoT. Furthermore, there was not information received during the PLTF 2024-2029 development regarding the Mbombela CITP or IPTN information.

The NDM IPTN is discussed in section 4.3.3 of this report. A Business plan and operational plan has been developed for the NDM IPTN.

4 Chapter 4: Integrated Transport Plans

4.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Integrated Development Framework Chapter are defined as follows:

- a) A list of planning authorities in the province, with their classification and the types of plans to be prepared by them.
- b) A programme for the preparation of the Integrated Transport Plans and their co-ordination with the Provincial Land Transport Framework.
- c) A reference to the summary of Integrated Transport Plans required by section 35(7) of the Act which must be contained in an annexure. The summary should be brief and focus on aspects and projects of regional or provincial significance.

The purpose of this chapter is to provide the reader with a summary of the existing planning authorities and the frameworks and plans required in the province and how it relate to a PLTF. The status of the Integrated Transport Plans (ITP) for the various municipalities with a summary of the projects in the available ITPs is provided in this chapter.

4.2 Background

As a requirement for all transportation goals and outcomes, such as applications for improving public transport infrastructure, improving accessibility, reducing congestion, and developing sustainable transport for all sectors etc, the possession of an integrated transport plan, which is a strategic document that focuses on the above goals, is essential in aiding the development process. As a result, and in accordance with the National Land Transport Act No.5 of 2009, all municipalities are required to develop their own Integrated Transport Plans (ITPs).

The National Land Transport Act (NLTA), Act No. 5 of 2009, requires the following plans under Chapter 4 (Transport Planning):

- National Land Transport Strategic Framework (NLTSF) prepared by the Minister.
- Provincial Land Transport Frameworks (PLTF) prepared by the MECs.
- Integrated Transport Plans (ITPs) prepared by Planning Authorities.

Although there are some parts which were removed from the act such as:

- Current Public Transport Records,
- Operating Licenses Strategies,
- Rationalisation Plans, and
- Public Transport Plans),

These have been included in the Integrated Transport Plan (ITP) under Section 27(3) of the National Land Transport Transition Act of 2000. However, Accelerated Modal Upgrading (AMU) in District Municipalities (Type 2 Planning Authorities) and Integrated Rapid Public Transport Networks (IRPTNs) in Cities (Type 1 Planning Authorities) have replaced the public transport plans.

4.3 Planning Authorities

The **National Land Transport Strategic Framework (NLTSF)** provides guidance for land transport planning across the country. At the provincial level, the **Provincial Land Transport Framework (PLTF)** is established to align with the NLTSF and guide transport planning within provinces.

Different types of Planning Authorities (PAs) are responsible for preparing specific transport plans based on relevant integrated development plans. **Type 1 PAs** prepare the **Comprehensive Integrated Transport Plan (CITP)**, which is submitted to the **Member of the Executive Council (MEC)** for approval. **Type 2 PAs** are tasked with developing the **District Integrated Transport Plan (DITP)**, while **Type 3 PAs** prepare the **Local Integrated Transport Plan (LITP)**.

Both DITP and LITP are also submitted to the MEC. All these transport plans are connected to the **Provincial Land Transport Framework**, ensuring a cohesive and consistent approach to transport planning at all levels of government. Finally, the provincial framework is submitted to the **Minister** for further alignment with national guidelines.

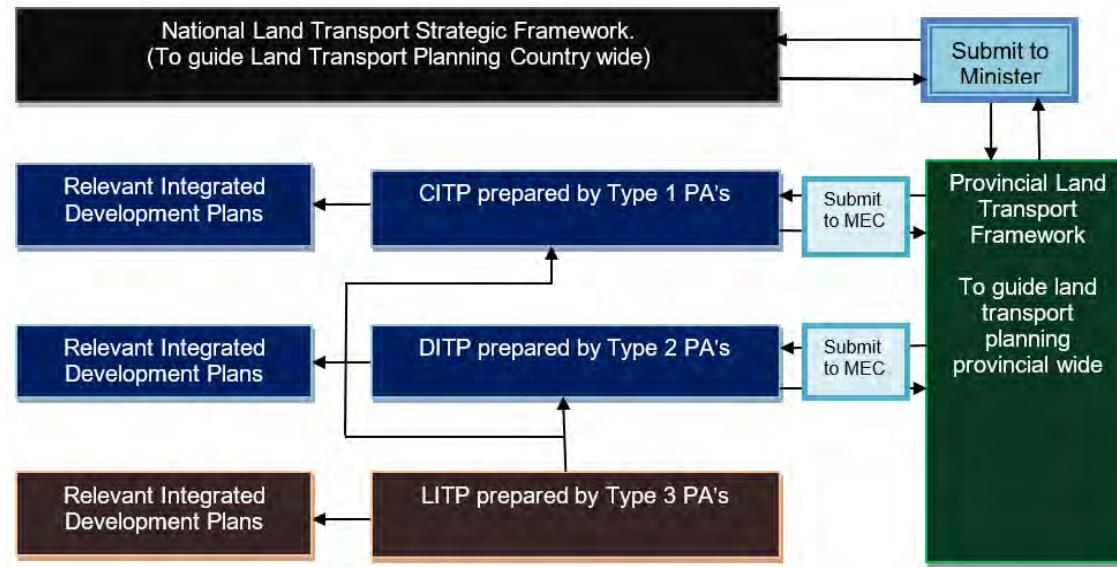


Figure 4-1: Relationship between different transport planning frameworks

The entire Province's District Municipalities are classified as Type 2 authorities. Type 2 authorities prepare District Integrated Transport Plans (DITPs), which is a compilation and assessment of all LITPs within a District. All local municipalities are classified as Type 3. Table 5-1 provides an overview of the integrated transport plans that District Municipalities in the province have created thus far. Sections that follow will cover ITP programs for each District Municipality and how they should be coordinated and in line with the Mpumalanga PLTF.

Table 4-1: Summary of existing ITPs

Type of Authority	Integrated Transport Plan	Municipality	Year Compiled
Type 2	District Integrated Transport Plan	Gert Sibande District Municipality	2014
Type 3	Local Integrated Transport Plan	Albert Luthuli Local Municipality	No
Type 3	Local Integrated Transport Plan	Dipaleseng Local Municipality	No
Type 3	Local Integrated Transport Plan	Govan Mbeki Local Municipality	No
Type 3	Local Integrated Transport Plan	Lekwa Local Municipality	No
Type 3	Local Integrated Transport Plan	Pixley ka Seme Local Municipality	No
Type 3	Local Integrated Transport Plan	Mkhonto Local Municipality	No
Type 3	Local Integrated Transport Plan	Msukaligwa Local Municipality	No
Type 2	District Integrated Transport Plan	Ehlanzeni District Municipality	2019
Type 1	Comprehensive Integrated Transport Plan	Mbombela Local Municipality	In Draft
Type 3	Local Integrated Transport Plan	Bushbuckridge Local Municipality	2007
Type 3	Local Integrated Transport Plan	Nkomazi Local Municipality	No
Type 3	Local Integrated Transport Plan	Thaba Chweu Local Municipality	No
Type 2	District Integrated Transport Plan	Nkangala District Municipality	2022
Type 3	Local Integrated Transport Plan	Emalahleni Local Municipality	No
Type 3	Local Integrated Transport Plan	Emakhazeni Local Municipality	No
Type 3	Local Integrated Transport Plan	Thembisile Hani Local Municipality	No

Type 3	Local Integrated Transport Plan	Dr JS Moroka Local Municipality	No
Type 3	Local Integrated Transport Plan	Steve Tshwete Local Municipality	No
Type 3	Local Integrated Transport Plan	Victor Khanye Local Municipality	No

4.4 Summary of District Integrated Transport Plans

4.4.1 Ehlanzeni District Municipality

The plans, projects and programmes outlined in this DITP document for 2019 to 2023 planning period are comprehensive and far-reaching, requiring commitment and vision. The upgrading of all forms of transport and particularly the transformation of the public transport system in Ehlanzeni District Municipality is the key to delivery in a series of other important areas of the district's development and economy according to the vision of the District's Integrated Development Plan.

The projects identified in the EDM DITP are extracted below:

- Institutional
 - 2 projects
 - R2 815 600 budget
- Law and Safety
 - 3 projects
 - R400 000 budget
- Financial
 - 2 projects
 - R400 000 Budget
- Management
 - 5 projects
 - R2 780 000
- Operational
 - 6 projects
 - R1 706 800
- Infrastructure
 - 36 projects
 - R140 750 000 budget
- Integration
 - 3 projects
 - R3 400 000 budget
- 57 projects in total with a budget of R152 252 400.00

Bases on the above, the EDM indicated the following strategic priorities for the district:

- 1) Ensure that the existing funds are spent cost effectively. An attempt should be made to achieve a 10% improvement in the use of existing funds. This will assist in increasing available funds to address the backlog on transport infrastructure and services.
- 2) Prevent further deterioration of the existing transport system by increasing maintenance spending. The neglected infrastructure will deteriorate to an extent that the cost of refurbishment is equal to the cost of providing new infrastructure. In general, maintenance costs should amount to 10% of the capital cost of the infrastructure on an annual basis.
- 3) Provide for increased investment in public transport. This will assist in attracting more patronage and hence derive value for money in funds spent on infrastructure and subsidies. In addition, real benefits will be realised by the needy public transport users.
- 4) Utilise licence fees specifically for transport. This could possibly replace part of the budget allocation by the Provincial Government.

Strategy Area	Focus Area	Intervention		Category		Intervention		Implementor		Amount (Rands)	Phasing					Authority							
		No	Project	Planning	Capital	Operational	Subsidy	Service	Facility	Road Link	Other	National	Province	District	Local	Other	2018/19	2019/20	2020/21	2021/22	2022/23		
Institutional	Arrangements and Communication	1	Establishment of Transport Operating Licenses Administrative Unit within the Planning Authority is necessary.	✓				✓					✓				1 600 000	338 000	338 000	338 000	338 000	Ehlanzeni DM	
		2	The taxi industry needs to be integrated in the transport development planning.	✓				✓					✓				1 125 600			562 800	562 800	Mpumalanga	
	SUB TOTAL																2 815 600	338 000	338 000	900 800	900 800	338 000	
Law and Safety	By-Laws	3	Establish and maintain law enforcement strategy.	✓				✓					✓				100 000	100 000				Ehlanzeni DM	
		4	Development of By-laws covering the public transport aspects.	✓				✓					✓				100 000		100 000			Ehlanzeni DM	
	Safety	5	Establishment of safety and security measures at the public transport facilities is critical. E.g lighting and fencing and security services.	✓				✓					✓				200 000			200 000		Ehlanzeni DM	
	SUB TOTAL																400 000	100 000	100 000	200 000	-	-	
Financial	Subsidies and Allocations	6	Financial resources for Public Transport Development	✓				✓					✓				100 000	100 000				Ehlanzeni DM	
		7	Public Transport Services Design: Update					✓					✓				300 000		200 000	100 000		Mpumalanga	
	SUB TOTAL																400 000	100 000	200 000	100 000	-	-	
	SUB TOTAL																2 780 000	928 000	588 000	588 000	338 000	338 000	
Management	Bus/Taxi	8	Development of a public transport management and information system.					✓					✓				1 600 000	338 000	338 000	338 000	338 000	Ehlanzeni DM	
		9	Develop guideline for provision of public transport facilities.	✓				✓					✓				350 000	350 000				Ehlanzeni DM	
		10	Management of Operating License Systems	✓				✓					✓				240 000	240 000				Ehlanzeni DM	
	Freight	11	Develop a freight management plan to guide on installation of weighbridges	✓				✓					✓				250 000		250 000			Nkomazi	
		12	Develop a freight management plan to guide on installation of weighbridges	✓				✓					✓				250 000			250 000		Bushbuckridge	
	SUB TOTAL																2 780 000	928 000	588 000	588 000	338 000	338 000	
Operational	Taxis	13	There is a need to subsidise taxis to eliminate "depart when full" modus operandi, avoiding long periods that passengers wait in a taxi before it departs.	✓				✓					✓				562 800		562 800			Ehlanzeni DM	
	NMT	14	Develop NMT Master Plan: Pedestrian, cycling and cart facilities	✓				✓					✓				211 000		211 000			City of Mbombela	
		15	Develop NMT Master Plan: Pedestrian, cycling and cart facilities	✓				✓					✓				211 000			211 000		Thaba Chweu	

Figure 4-2: DITP Figure 10-1A

Strategy Area	Focus Area	Intervention		Category		Intervention		Implementor		Amount (Rands)	Phasing					Authority							
		No	Project	Planning	Capital	Operational	Subsidy	Service	Facility	Road Link	Other	National	Province	District	Local	Other	2018/19	2019/20	2020/21	2021/22	2022/23		
Operational	NMT	16	Develop NMT Master Plan: Pedestrian,cycling and cart facilities	✓				✓									211 000			211 000		Nkomazi	
		17	Develop NMT Master Plan: Pedestrian,cycling and cart facilities	✓				✓									211 000			211 000		Bushbuckridge	
	Special Needs	18	Provide transport accessibility for the elderly and the disabled.	✓				✓									300 000		300 000			Ehlanzeni DM	
		SUB TOTAL														1 706 800	-	1 073 800	211 000	211 000	211 000		
Infrastructure	Buses	19	Bus Terminus Upgrade: Mkuhlu Depot	✓				✓									1 800 000		1 800 000				Bushbuckridge
		20	Bus Terminus:Hluyukani Holding and Loading	✓				✓									2 700 000			2 700 000			Bushbuckridge
		21	Bus Terminus: Marite Holding and Loading	✓				✓									2 700 000			2 700 000			Bushbuckridge
		22	Bus Terminus: Matibidi Holding and Loading	✓				✓									2 700 000			2 700 000			Bushbuckridge
		23	Bus Terminus: Rolle Holding and Loading	✓				✓									2 700 000				2 700 000		Bushbuckridge
		24	Bus Terminus: Bochfontein Holding and Loading	✓				✓									2 700 000		2 700 000				Nkomazi
		25	Bus Terminus: Magogeni Holding and Loading	✓				✓									2 700 000		2 700 000				Nkomazi
		26	Bus Terminus: Mgobodi Holding and Loading	✓				✓									2 700 000			2 700 000			Nkomazi
		27	Bus Terminus: Kamhlushwa Holding and Loading	✓				✓									5 400 000			2 700 000	2 700 000		Nkomazi
		28	Bus Terminus: Mziti Holding and Loading	✓				✓									2 700 000				2 700 000		Nkomazi
	Taxis	29	Bus Terminus: Steenok Holding and Loading	✓				✓									2 700 000					2 700 000	Nkomazi
		30	Upgrade Taxi Rank - Lowveld Mall Taxi Rank (22 bays to accommodate)	✓				✓									5 500 000		5 500 000				City of Mbombela
		31	Upgrade Taxi Rank - Block C Naas Taxi Rank (132 bays to accommodate)	✓				✓									11 000 000			11 000 000			Nkomazi
		32	Upgrade Taxi Rank - Steenbok Taxi Rank (24 bays to accommodate)	✓				✓									5 500 000		5 500 000				Nkomazi
		33	Upgrade Taxi Rank - Kamhlushwa Taxi Rank (11 bays to accommodate)	✓				✓									4 000 000			4 000 000			Nkomazi
		34	Upgrade Taxi Rank - Sabie Taxi Rank (13 bays to accommodate)	✓				✓									4 600 000				4 500 000		Thaba Chweu

Figure 4-3: DITP Figure 10-1B

Strategy Area	Focus Area	Intervention		Category		Intervention		Implementor		Amount (Rands)	Phasing					Authority				
		No	Project	Planning Capital	Operational Subsidy	Service Facility	Road Link	Other	National	Province	District	Local	Other	2018/19	2019/20	2020/21	2021/22	2022/23		
Infrastructure	Taxi	35	Upgrade Taxi Rank - Lydenburg Taxi Rank (47 bays to accommodate)	✓			✓					✓		7 000 000			7 000 000			Thaba Chweu
		36	Upgrade Taxi Rank - Thulahamashe Complex Taxi Rank (36 bays to accommodate)	✓			✓					✓		8 000 000				6 000 000		Bushbuckridge
		37	Upgrade Taxi Rank - Acomhoek Plaza Taxi Rank (40 bays to accommodate)	✓			✓					✓		8 000 000				6 000 000		Bushbuckridge
		38	Upgrade Taxi Rank - Makhoma Build it Taxi Rank (11 bays to accommodate)	✓			✓					✓		4 500 000					4 500 000	Bushbuckridge
		39	Upgrade Taxi Rank - Mphiwe Family Taxi Rank (12 bays to accommodate)	✓			✓					✓		4 500 000					4 500 000	Bushbuckridge
		40	Upgrade Taxi Rank - Pauliana Taxi Rank (58 bays to accommodate)	✓			✓					✓		7 000 000					7 000 000	Bushbuckridge
		41	Upgrade Taxi Rank - Toronto Taxi Rank (33 bays to accommodate)	✓			✓					✓		5 500 000					5 500 000	Bushbuckridge
		42	Upgrade Taxi Rank -Boxer Taxi Rank (46 bays to accommodate)	✓			✓					✓		7 000 000				7 000 000		Bushbuckridge
		43	Upgrade Taxi Rank -Crossroad Taxi Rank (31 bays to accommodate)	✓			✓					✓		5 500 000					5 500 000	Bushbuckridge
		44	Upgrade Taxi Rank -Mkhulhu Plaza Taxi Rank (28 bays to accommodate)	✓			✓					✓		4 500 000					4 500 000	Bushbuckridge
		45	New Taxi Rank - Buffelspruit (16 bays must be constructed)	✓			✓					✓		4 500 000		4 500 000				Nkomazi
		46	New Taxi Rank - Bushbuckridge (18 bays must be constructed)	✓			✓					✓		4 500 000			4 500 000			Bushbuckridge
		47	New Taxi Rank - Hazyview (28 bays must be constructed)	✓			✓					✓		5 000 000				5 000 000		City of Mbombela
		48	Taxi Major Lay-bys: Auckley, 10 in Total	✓			✓					✓		800 000		800 000				Bushbuckridge
		49	Taxi Major Lay-bys:Hlamalane, 11 in Total	✓			✓					✓		800 000			800 000			Bushbuckridge
		50	Provide Official Truck Stops	✓			✓					✓		250 000		250 000				Nkomazi
NMT	NMT	51	Provide NMT Facilities: Cycling,Cart and Walking facilities	✓			✓					✓		1 350 000		1 350 000				City of Mbombela
		52	Provide NMT Facilities: Cycling,Cart and Walking facilities	✓			✓					✓		1 350 000			1 350 000			Nkomazi
		53	Provide NMT Facilities: Cycling,Cart and Walking facilities	✓			✓					✓		1 350 000				1 350 000		Thaba Chweu
		54	Provide NMT Facilities: Cycling,Cart and Walking facilities	✓			✓					✓		1 350 000					1 350 000	Bushbuckridge
SUB TOTAL													140 750 000	-	25 100 000	35 450 000	47 450 000	32 750 000		

Figure 4-4: DITP Figure 10-1C

Strategy Area	Focus Area	Intervention		Category			Intervention		Implementor			Amount (Rands)	Phasing					Authority				
		No	Project	Planning	Capital	Operational	Subsidy	Service	Facility	Road Link	Other		National	Province	District	Local	Other	2018/19	2019/20	2020/21	2021/22	2022/23
Integration	Transport Plans	55	Develop LITPS every 5 years	✓				✓				3 000 000										Ehlanzeni DM
		56	Intergration of public transport planning with other departments e.g. housing and land use management.	✓				✓				200 000								200 000		Ehlanzeni DM
		57	Establishment of local transport forums and liaison committees.	✓				✓				200 000										Ehlanzeni DM
		SUB TOTAL										3 400 000	-	3 200 000	-	-	-	200 000				
GRAND TOTAL												152 252 400	1 466 000	30 599 800	37 443 800	48 839 800	33 837 000					

Figure 4-5: Figure 4 4: DITP Figure 10-1D

4.4.2 Gert Sibande District Municipality

The last integrated transport plan for the Gert Sibande District Municipality (GSDM) was compiled in 2014. The ITP is outdated. A general overview of the key issues that were highlighted to be addressed regarding roads and transportation includes among others the following:

- The over usage of roads by heavy coal haulage and other freight trucks and addressing the negative impacts on road conditions.
- Supporting Municipalities to improve the condition and status of rural road networks.
- Reducing to a more acceptable level the number of heavy haulage vehicles and freight trucks that use the municipal road networks.
- Reducing the potential road hazard due to overloaded freight trucks using the roads and mitigating the associated risks due to these high volumes of overloaded vehicles.
- Improve the quality of monitoring and enforcement of overloaded vehicles within the district.
- The upgrade of roads from gravel to surface.
- The development of a Provincial Infrastructure Master Plan.
- Improve the quality of road infrastructure monitoring and evaluation.
- Reviewing the outdated DITP for use by the local municipalities and ensuring all practices are in line with the National Land Transportation Act (NLTA 2009).
- The development of LITP's in line with the DITP.
- Rail networks linking Lothair to networks in Swaziland are essential for providing access to Maputo harbour and Richards Bay, as a result it is planned that assistance be given to both provincial and national governments, as well as TFR, for the investigating and planning required for implementation of the mentioned rail networks.
- Implementation of programmes specific to the DM arising from the modern PLTF, NATMAP 2050 and freight logistics strategy once approved.

The projects identified in the ITP are considered to be outdated. Nevertheless, the following projects were noted:

- Public transport projects
 - 46 projects
 - R46 645 000 budget (Refer to ITP for project details.)
- Transport infrastructure strategy projects
 - 8 Projects
 - R515 568 045 budget

Project	Cost (R)
Maintenance Requirements	
Class 3 district coal routes (routine and preventative maintenance)	R 942 045
Maintenance of traffic signs and road markings	R 8 200 000
Upgrading of gravel roads in rural areas	R 180 000 000
Pothole patching and repair	R 26 250 000
New Road Infrastructure	
Standerton road linkage investigation is required	R 200 000
Piet Retief road linkage investigation is required	R 200 000
Bethal road linkage investigation is required	R 200 000
Road infrastructure projects on current budget	R 299 576 000
Total cost	R 515 568 045

- Travel demand management projects
 - 3 projects
 - R1 500 000.00

Project	Cost (R)
Urban travel demand strategy	R 500 000.00
Rural travel demand strategy	R 500 000.00
Public transport strategy	R 500 000.00
Total cost	R 1 500 000.00

- Freight and logistics projects
 - 3 projects
 - R4 700 000.00

Project	Actions	Cost
Hazmat strategy	Develop strategy	R 1 500 000.00
Overload control strategy and improved freight vehicle management	Overload control strategy	R 200 000.00
	Implement screening stations (4 stations)	R 2 000 000.00
Law enforcement for freight operations	Reprioritise HV law enforcement	R 1 000 000.00
Total cost		R 4 700 000.00

- NMT projects.
 - 2 major project types
 - R163 054 064.00

Project	Actions	Cost
NMT (at schools)	Type 1	R 9 937 200.00
	Type 2	R 9 086 000.00
	Type 3	R 15 014 664.00
	Type 4	R 33 058 200.00
	Type 5	R 30 078 000.00
NMT (at public transport facilities)	Cycle lanes	R 43 200 000.00
	Walkways	R 22 680 000.00
Total cost		R 163 054 064.00

From the Strategic Plan 2020-2025 – District development model (DDM) – which is in line with the municipality's Integrated Development Plan (IDP).

Projects to be delivered relating to roads:

- Upgrading roads from gravel to surface.
- Integrated Rural Mobility and Access (IRMA).
- Paving of municipal township and rural roads.
- Rehabilitation of coal haulage routes.
- Rehabilitation of tourism routes.
- Resealing of strategic and access roads.
- Re-gravelling of strategic and access roads.
- Pothole patching of strategic and access roads.
- Blading of strategic and access roads.
- Routine road maintenance.

4.4.3 Nkangala District Municipality

This chapter outlines Nkangala District Municipality's planned and budgeted projects to be implemented by the municipality as per each Key Performance Area. Most of these projects span out for the duration of the medium-term period (3 years). These projects form part of the municipal strategy in response to the five-year development priorities of the municipality.

Nkangala District Municipality (NDM) recently updated its Integrated Transport Plan in 2022. The programs and projects that are suggested in this ITP are considered to be either ongoing or upcoming initiatives (subject to a

post-implementation audit). All the district's present transport demands, obstacles, and achievements will be reflected in this ITP.

A broad overview of key focus areas within the district is given below:

4.4.3.1 Rapid Public Transport Network

- Primary East-West Linkage.
 - National Routes N4 and N12.
 - Route associated with Moloto Development Corridor with Dr. J. S Moroka Local Municipality.
- Primary North South Linkage
 - R544 between Witbank and Kwamahlanga.
 - R544 between Witbank and Kriel.
 - R545 between Ogies and Kriel.

4.4.3.2 Nkangala International Airport City (Delmas Cargo Airport)

The overall project objectives are to establish a commercially viable international airport serving:

- Long Haul freight on a 4.4km runway
- Low-cost International Charter flights
- Normal Passenger component
- Develop an industrial/ commercial hub that will accommodate:
 - Warehouses, shopping centres and a convention centre.
 - Skills training centre, offices, manufacturing, and trading facilities.
 - Housing.

The project aims to use the creation of an economic hub with the international airport as a catalyst.

4.4.3.3 Major Corridors

The NDM has identified the following major corridors as significant for the district:

- N4 Maputo Corridor
- N12 Corridor
- Moloto Corridor

4.4.3.4 Midleni Development Corridor

The Midleni Development Corridor refers to the R555 between Middleburg and eMalahleni, as well as the rail corridor. This corridor is significant based on its commercial, industrial and residential activities, as well as its feeder connectivity to the Maputo Corridor. According to the NDM DITP 2022-2025, the following 3 projects were seen as the best aligned to the NDM needs:

- Agricultural Hub.
- Logistic Park or freight village and truck stop.
- Upgrade of route R555.

4.4.3.5 Roads Infrastructure

Nkangala District Municipality's planned and budgeted projects must prioritise road infrastructure development from a special development point of view.

- The conglomeration of settlements in the Dr JS Moroka Municipality, especially those in the Siyabuswa area in support of the development of a node in this area.
- The conglomeration of settlements in the Thembisile Municipality, especially those in the KwaMhlanga area in support of the development of a node in this area
- The informal settlement situated west of Emhlanga City.
- The informal settlement situated west of Middelburg City.
- The informal settlement is situated around Delmas Town.
- The informal settlement is situated around Belfast, Machadodorp, Dullstroom and Waterval Boven.

In addition, the following strategic development areas were identified in Nkangala District:

- Middelburg Business Centre and Industrial areas.
- Emalahleni Business Centre and Industrial areas, as well as Ga-Nala (Kriel).
- Belfast town as a gateway to the major tourism centres in the province.
- Dullstroom, Machadodorp and Waterval-Boven.
- Delmas and the agricultural holdings to the west thereof.
- The areas around the Moloto Rail Corridor in the Thembisile and Dr JS Moroka area with special emphasis on KwaMhlanga, Kwaggafontein and Siyabuswa.

4.4.3.6 Bus and Taxi school drop of zones.

Learners are transported by bus and taxi, and it is essential that these learners be picked up and dropped off at safe and accessible locations. Provision is required at schools to ensure that scholars arriving on foot or bicycle are not endangered and that scholars alighting and boarding at schools are not at high risk. Embayments should be provided, shelters should be provided, and speed control measures should be provided.

4.4.3.7 Financial and Economic Support to Public Transport

NDM indicated that the following strategies need to be included for the promotion of public transport:

- Modal Integration strategies. Co-ordination and integration of public transport services and limiting the duplication of services.
- Subsidised bus transport strategies. Provincial subsidisation of bus transport and bus contracting
- Taxi Transport strategy. Taxi regulation and formalisation, registration and permit conversion process.
- Rural Transport Strategy. One of high priority area for strategic development.

4.4.3.8 Sidewalks

The sidewalks proposed amount to 971km along the surfaced roads in the district.

4.4.3.9 Public Transport Stops

Approximately 370 stops are required in the district.

4.4.3.10 Public Transport ranks

The ranks in the district were assessed and most ranks lack basic infrastructure, and some ranks are in a poor condition.

4.4.3.11 Financial Plan

The NDM financial plan is a financial plan that was developed as an evaluation of revenue and cost to implement, operate, manage, and maintain the integrated transport system of NDM. The financial plan and commitment based on the needs identified in the NDM are as follows:

Table 4-2: NDM ITP Financial Model for the new system_ Source NDM DITP 2022-2027

Infrastructure Cost	
Item	Cost
Provincial Land Transport Framework	SMEC Internal Ref. BG426
Mpumalanga Provincial Land Transport Framework (MPLTF)	17 March 2025
Prepared for Department of Public Works, Roads, and Transport – Mpumalanga Province	

Public Transport Ranks	R135 175 029
Sidewalks (971km)	R1 456 500 000
PT Stops and shelters (370)	R55 500 000
Total	R1 647 175 029
Maintenance Cost	R3 851 353

4.4.3.12 RPTN Business Plan

The NDM ITP business plan indicated that the following is required to transition the existing operators into a formal public transport system, as encompassed through the goals of the NLTA:

- Public Transport Industry Transition
 - VOC
 - Developing to competition to reduce costs.
 - Lessons learnt on VOC
 - Training of mini-bus taxi operators and owners of the VOC
- Public Transport Services Contracts
- Institutional structure and responsibilities
 - Responsibilities
 - Environmental needs
 - Cost and time saving needs
 - Communication and awareness
 - Passenger needs
 - Road traffic and corridors
 - Ticketing and fares
 - Operational requirements
- Transport Related departments that would directly or indirectly be involved
 - Planning and development
 - Infrastructure services
 - Infrastructure cluster
 - Budget and Treasury
- Oversight Company: The DITP oversight company will be responsible for:
 - Monitoring and administration of the contracts
 - Fare management and revenue collection
 - Financial administration
 - Marketing and branding
 - Maintenance and cleaning of facilities
 - Safety and security
 - Transport Planning
- Fleet and depots ownership
- Stakeholder engagement
- Funding sources
- Implementation Plan
 - Short term plan (0-3years)
 - Confirmation of demand and supply
 - Update operational plans
 - Update business plan
 - Establishment of an intermodal planning committee
 - Preliminary designs
 - Industry engagements
 - Medium term plan (4-10 years)
 - Detailed design
 - Operational Rollout
 - Industry negotiations
 - Integrated fare management systems
 - Procurement of fleet
 - Long term plan
 - Update the designs and cost and rollout plan based on funding

5 Chapter 5: Integrated Development Plans

5.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Integrated Transport Plans Chapter are defined as follows, unless already defined under the Status Quo Chapter:

1. *The approved spatial development strategy or plan for the province. This should include:*
 - a) *An integrated map illustrating the frameworks for future development, with a short description of:*
 - i. *Spatial development;*
 - ii. *Economic development;*
 - iii. *Housing development, and*
 - iv. *Other development initiatives.*
 - b) *This map should also give an indication of where the growth areas of the province are and where specific development initiatives are taking place that require improved transportation.*
 - c) *Information on each spatial development initiative in the province, with its status and urban renewal and rural development nodes where applicable.*
 - d) *A broad description of relevant social, demographic and environmental issues that affect transport.*
2. *A statement of how the transport strategy will facilitate the achievement of the approved spatial development plan and economic development in the province, the integration of social, economic and human settlement development strategies as well as other relevant development initiatives or strategies.*
3. *An indication of the strategic transport network of roads and railways and provincial public transport networks in relation to land use development and the built environment.*
4. *A summary of strategies promoting land use and transport integration, in keeping with national policies.*

In this chapter, the Land use and transportation integration forms the backbone of an efficient settlement pattern. It not only ensures the cost-effective operation of the Mpumalanga Province's transportation system, but it also has the potential to rationalise settlement patterns as settlements tend to concentrate close to major transportation routes.

In addition, land use and transportation integration can create a better relationship between areas of residence and areas of employment, which can lead to shorter commuter distances and a better two-way use of transport infrastructure.

From an integrated developmental perspective, there are two main focus areas, namely that of human settlement nodes and economic development nodes. This section provides an overview of these two main focus areas from a transport perspective.

The process of this chapter is to identify the Human Settlement nodes in the province, as well as economic development nodes.

Hereafter, the land use and transport integration will be developed linking the land uses, human settlements and economic nodes to transport corridors, such as the roads and rail corridors.

Similarly, the Economic development corridors and nodes that are provincially significant will be identified and mapped with regard to influential transport corridors.

Hereafter, the areas requiring good access due to future development will be identified and the corridors noted and GIS mapped.

Finally, the social, demographic and environmental issues impacting transport in the province will be identified and highlighted.

The information for the economic development corridors and human settlements will be sourced from the SDF plans for the province as a whole, as well as in the districts, consultation meetings and from the Provincial Spatial Rationale.

Strategic plans and frameworks will be established to effectively ensure transport systems are planned for the economic and strategic developments within the province.

Essentially the economic fabric of Mpumalanga will be analysed and the transportation systems and corridors will be viewed from their ability to either enhance or diminish said economic activities.

5.2 Mpumalanga Spatial Development Framework

5.2.1 Introduction to the provincial SDF

The Mpumalanga Provincial Spatial Development Framework has been compiled as far ago as 2018, however, it is still the official spatial development plan for the province and as such it needs to be reflected in the new PLTF. Once the SDF is being upgraded in its new cycle, that document should then reflect the proposals of the new PLTF to ensure that land-use and transportation planning are always integrated in its relative approaches.

The Spatial Planning and Land Use Management Act, 2013 (Act No 16 of 2013) (SPLUMA) passed on August 2013 seeks to address past spatial and regulatory imbalances such as the existence and operation of multiple laws in national and provincial spheres and the self-governing territories. The Act, therefore, promotes a uniform, recognisable and comprehensive system of spatial planning and land use management and land development to maintain economic unity, equal opportunity and equal access to governmental services.

The context of spatial planning as specified in SPLUMA is categorised into three levels: Municipal planning, Provincial Planning, and National Planning.

The objectives of the PSDF are to cover the following aspects at a provincial level:

- Integration of development policies, strategies, and objectives at various levels.
- Prioritised land use development patterns.
- Translate developmental needs and unpack spatial directives and objectives for implementation.
- Provide investment guidance and the mechanisms for implementation.
- Provide guidance on sectoral development needs, investments, integration and programme implementation.

5.2.2 Topography and its influence on transportation corridors

Mpumalanga, which means "Place where the Sun rises" lies in the north-eastern corner of South Africa and covers an area of 76 495 km². The Mpumalanga Province is bordered by Limpopo in the north, Mozambique and eSwatini in the east, Gauteng and Free-State in the west, and KwaZulu-Natal in the south. Mpumalanga makes up 6.5% of South Africa's land area and is home to a population of 4 523 900 million.

The topography of Mpumalanga region is a varied one, comprising of the Highveld (high lying) and the Lowveld (low lying) regions. Mpumalanga is mainly situated on the high plateau grassland known as Highveld.

The Highveld stretches for hundreds of kilometres eastwards, until it rises towards mountain peaks and deep valleys of the Escarpment in the north-east. From the escarpment, it plunges hundreds of meters down to the low-lying area known as the Lowveld. The province's landscape is characterized by the Northern Drakensberg escarpment, grasslands, numerous valleys, mountain passes, rivers, waterfalls, wetlands, and forests. The Bushveld includes the southern part of the famous Kruger National Park area. The central part of the province, being a part of the escarpment, is mountainous and consists of alpine grasslands and the Afromontane Forest. The Lowveld region is mostly flat with some rocky outcrops.

It is thus easy to ascertain that transportation corridors between the Highveld and the Lowveld need to cross the difficult escarpment regions, where roads and railways are characterised with steep passes and tunnels and where communication links are expensive to build and maintain.

5.2.3 Geology and Minerals

The province of Mpumalanga contains within its boundaries evidence of the earliest phases of the history of the world. In the vicinity of Barberton is one of the oldest and best-preserved rock sequences never found anywhere on earth.

The Mpumalanga Province is characterised by the presence of most the geological formations in the country, such as: the Witwatersrand Supergroup (gold ore resources), Bushveld Complex (platinum group of minerals), and the Basement Complex geological formations. The Basement Complex is found in the Lowveld as scattered patches in the Southern Highveld. The stratum consists of various rocks, such as: dolerite, granite gabbro, gneiss, norite, tuff, and shale. The Barberton Supergroup represents the greenstone belts in Mpumalanga. The greenstone is economically important and made up of valuable deposits, such as: gold, antimony, copper-zinc, iron, asbestos, talc, mercury, magnetite, and gemstone. The Barberton Mountain land is a major gold-producing greenstone belt in South Africa.

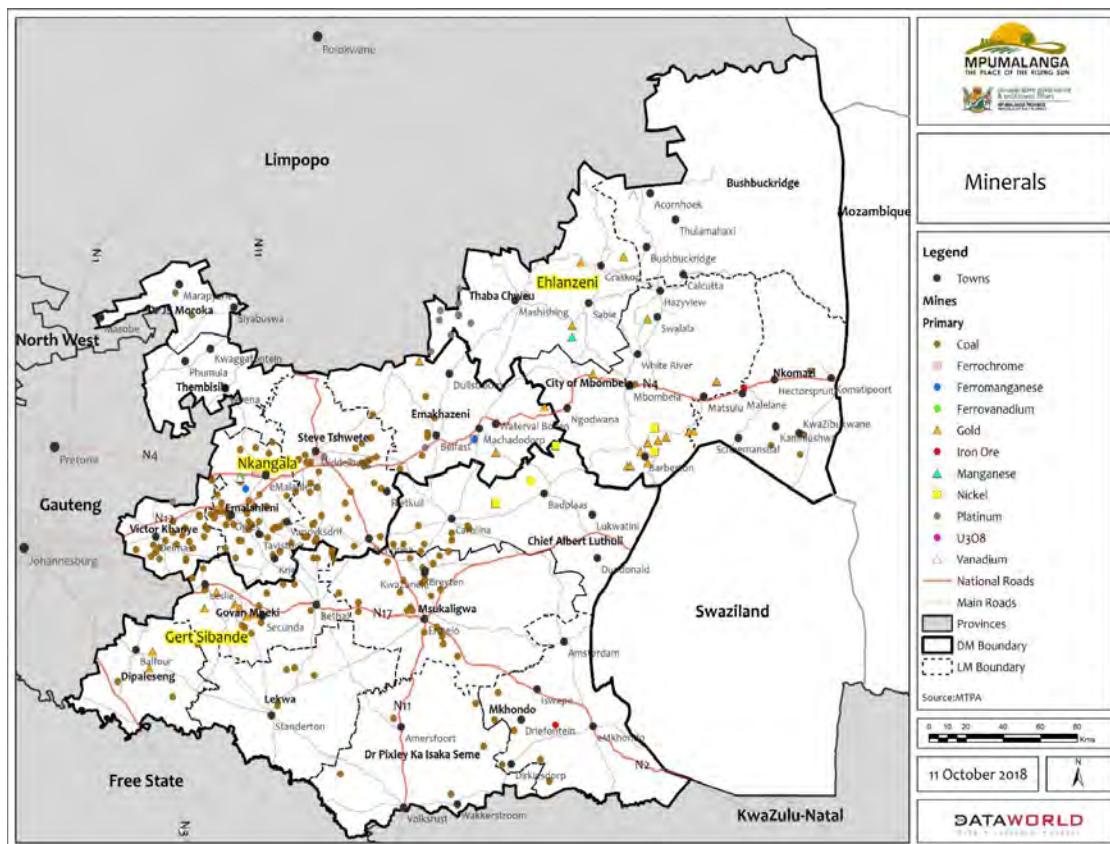


Figure 5-1: Sources of Minerals in Mpumalanga

South Africa's coal reserves are ranked amongst the top 10 largest in the world. More than 80% of South Africa's coal is sourced in Mpumalanga, with the town of Emalahleni being the centre of the industry. It is important to note that the areas of eMalahleni Local Municipality and Steve Tshwete Local Municipality, both falling under the Nkangala District Municipality, are intensely mined for coal, with an exceptionally high concentration of coalmines and Eskom power plants in this area.

Other minerals found in the province include gold, platinum group minerals, chromite, zinc, cobalt, copper, iron and manganese. The southern half of the eastern limb of the platinum-rich Bushveld Igneous Complex runs south towards the towns of Lydenburg and Machadodorp. Deposits of chromite, magnetite and vanadium in this area are the basis of the ferro-alloy complex in Witbank-Middelburg and Lydenburg. Nkomati Mine is South Africa's only pure nickel operation.

Gold was found here more than 120 years ago, and these gold deposits are the oldest recognized gold ores on Earth. It was one of the indicators of industrial development in South Africa. Some of these mines are still producing gold which makes them the most established gold mines on the planet.

5.2.4 Mining

Mining contributes 21.8% to the provincial economy. There are also other major sectors that contribute substantially to the province's economy, namely wholesale, retail, catering and accommodation (13%), manufacturing (12%), general government services (10.8%), as well as finance, real estate and business (9.4%). However, the importance of mining as an economic sector can hardly be over-emphasised. Mining is proliferating at an unprecedented pace, and it is estimated that more than 60% of the province is under either a prospecting or mining right application.

Coal mining remains the most important mining activity in the province and in the Emalahleni coal mining area there are 22 collieries in an area no more than 40 km in any direction.

It is thus obvious that the Mpumalanga provincial transportation corridors must be built and maintained around the specific needs of the mining sector as a minimum objective of enhancing the provincial economy.

5.2.5 Agriculture

Mpumalanga has a sub-tropical climate characterised by hot summers and mild to cool winters shifting to cold and frosty conditions in the Highveld regions. The province is characterised by summer rainfall and thunderstorms, except the escarpment area which receives fair levels of precipitation throughout the year. The region experiences a summer-rainfall area separated by the escarpment into two, namely, (a) the Highveld, which is characterised by cold frosty winters and moderate summers, and the (b) Lowveld which is characterised by mild winters and subtropical climate. During winter the Highveld and Escarpment sometimes experience snow. The annual rainfall occurs mainly during summer in the form of heavy thunderstorms.

Given its location between the Drakensberg Escarpment and Vaal River traversing through Mpumalanga, the diverse climate in the region makes the production of a wide variety of crops possible. The Lowveld is subtropical and due to its latitude and proximity to the warm Indian Ocean, it is also renowned for citrus and subtropical fruits. The Highveld is comparatively much cooler, due to its altitude, produces much of the summer grains, such as maize and grain sorghum. Exotic trees plantations, such as: gum and wattles cover most of the hills on the Escarpment as it receives the most precipitation, with all other areas being moderately hydrated by mostly thunderstorms.

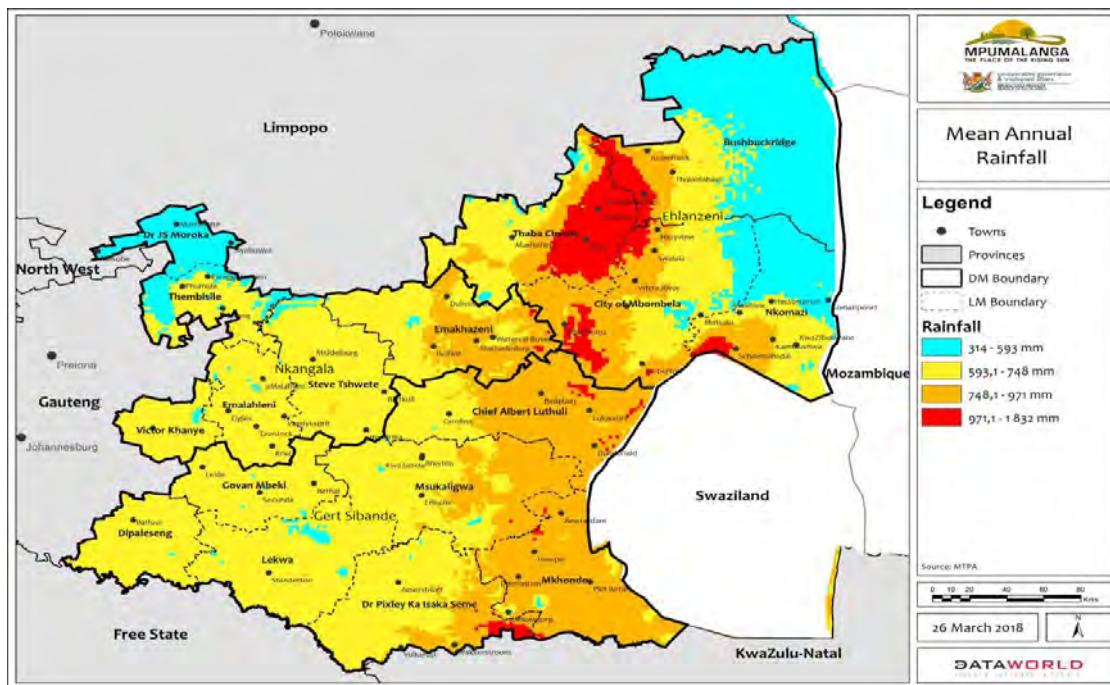


Figure 5-2: Annual rainfall

The Mpumalanga Province covers an area of 76,495, km² or 8% of the country. 22% of the province's land is covered by farming related activities. The farming related land covers are dry land cultivation, irrigated cultivation and subsistence cultivation. These land covers respectively contribute 18%, 2% and 2% to the provincial area. The dry land cultivation is the largest land cover class in the province, followed by forestry plantation (6%), wetlands (3%) and urban built-up (3%).

The dry land cultivation occurs in the western part of the province in Nkangala and Gert Sibande districts, whereas irrigated cultivation lands are located in Ehlanzeni District. In fact, 66% of the province's irrigated land is located in the Ehlanzeni District, most of these lands are located in the Nkomazi municipality. The plantation lands are located mostly at the centre of the province forming a belt stretching north to south mainly along the escarpment.

The agricultural sector plays an essential role in the fight against poverty and securing food security for the people of Mpumalanga. The role of agriculture in supplying employment to unskilled workers, ensuring food security to rural people as well as stimulating other sectors in the value chain, such as: manufacturing and trade makes it an important sector towards attainment of growth and development.

The current land utilization by agriculture is determined by the natural resources such as soils, water and climate, and land ownership. Land utilized for commercial farming is about 90% of the total farmland, whilst for small scale/emerging farming is less than 10%.

In terms of agricultural production, summer cereals and legumes (sunflower seed, sorghum, dry beans, soybeans, potatoes, cotton and maize) dominate the Highveld region, while sub-tropical and citrus fruit and sugar are grown extensively in the Lowveld. Fruit farming includes apples, peaches, citrus, nuts and sub-tropical

fruit such as mangoes, litchis, and avocado pears. Mpumalanga is also well known for intensive and extensive beef production and the production of other animal produce, such as: chickens, eggs and pork.

Other major crops include cotton, potatoes and onions. The Lowveld region is renowned for its sugar, citrus and subtropical fruit (bananas, avocados, mangoes). Litchis, guavas and pineapples are also grown.

For the most part, dry land farming is utilized in agricultural production in the Highveld, with intensive irrigation activities taking place in the Loskop area near Groblersdal and in the Lowveld area adjacent to the Crocodile and Komati rivers. Considerable potential for increased agri-processing exists in the province, but this is constrained by access to water resources.

The agricultural sector is threatened by various internal and external constraints. Some of the constraints are poor conditions of the rural road infrastructure, ownership of land, land reform failures, mining activities, urbanization, climate change, access to finances, water availability, lack of agri-processing and markets, human capacity, governance and marginal soils.

The protection of high potential and productive agriculture land is necessary. The Agricultural sector is competing with other land users for the same land. Most notably are the expansion of the mining industry and urbanization. These have serious implications on land reform and food security. The level of mining, which is already high, and prospecting applications combine to cover the greater majority of the land area, thus putting agriculture and the environment to high risk.

The rural roads network that connects farms to their markets are thus the most important issue to be dealt with in terms of the provincial land transport framework. The agricultural sector will only blossom if this current restraint is adequately addressed.

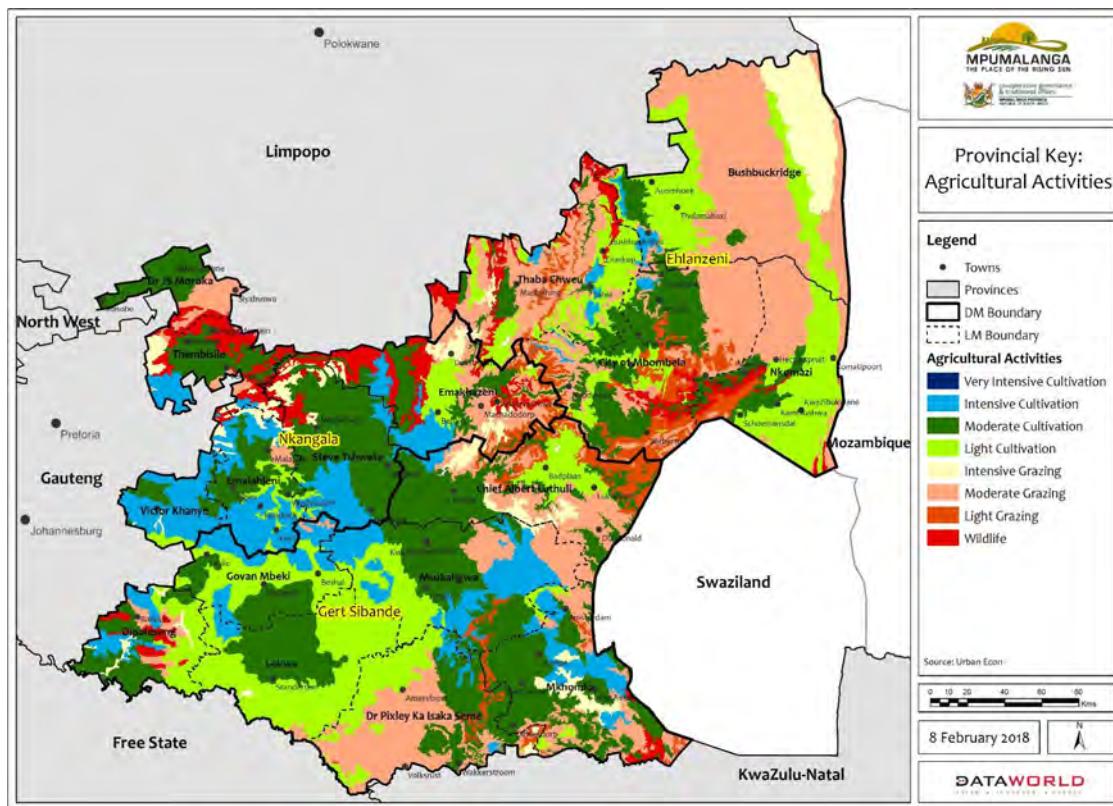


Figure 5-3: Key Agricultural Activities

5.2.6 Forestry

The forestry industry in South Africa is a major contributor to the national economy. Commercial plantations cover an area of about 1.2 million hectares. The industry produces approximately 18.5 million m³ (cubic meters) of commercial roundwood worth about R7.0 billion and a gross contribution to GDP of R21.4 billion. Commercial plantations are mainly concentrated in Mpumalanga (518 689 ha), KwaZulu-Natal (503 213 ha), Limpopo (48 284 ha), Eastern Cape (141 413 ha) and Western Cape (61 454 ha).

Pine and eucalyptus are the predominant species in the South African forestry industry. Forestry and logging, as a subcomponent of agriculture, added some 1.4% to Mpumalanga's total GVA in 2009. About 39 of the 148 primary processing plants in the country are located in the province, including the continent's largest integrated pulp and paper mill in Godwana, and softwood mill. Over R9.5 billion is invested in the province's forestry industry. The three largest employers in the sector are:

Komatiland Forests (KLF) - KLF is a subsidiary of South African Forestry Company Limited (SAFCOL) whose sole shareholder is the government, represented by the Department of Public Enterprises. It operates 18 commercial plantations comprising a total surface area of 187 320 hectares. Its main business is the conduct of forestry, timber-harvesting, timber processing and related activities.

Sappi Forests - Sappi Forests supplies over 70% of the wood requirements of Sappi Southern Africa, from its own and managed commercial timber plantations of 561 000 hectares. This equates to more than 35 million tons of standing timber.

Mondi South Africa - Owns and manages over 307 000 hectares of forestry plantations. The organisation employs more than 1 600 people; and has a contractor base of around 15 000 people, most of whom are employed in the forestry sector.

The Provincial Growth and Development Strategy stresses the very low growth per annum in formal employment opportunities, at 1.2% per annum, when there is a 4.6% per annum growth in the labour force. The province struggles to provide enough formal employment opportunities, and this has resulted in a high increase in the number of unemployed people. The need for additional development opportunities, including forestry as an important primary employer, must be viewed in this context.

The total mapped area of natural forest (also called indigenous forest) in South Africa is approximately 0.5 million ha. A relatively small reduction (less than 6%) in total forest area was recorded from 1944 to 1996 but there was a substantial loss of small forest patches (<0.5ha). Around 25% of South Africa's natural forests are conserved within timber plantations.

Mpumalanga province has extensive commercial forests and sophisticated processing plants dealing with everything from sawn logs, pulp and paper to board. The province has South Africa's biggest sawmill and its largest panel and board plant, as well as the biggest integrated pulp and paper mill in Africa. Whilst forestry and logging contributed 1.4% to Mpumalanga's GVA in 2009, downstream production of wood and wood products, as a subcomponent of manufacturing, added another 1.1% to the provinces' GVA in 2009 and is an important part of the manufacturing profile of the province.

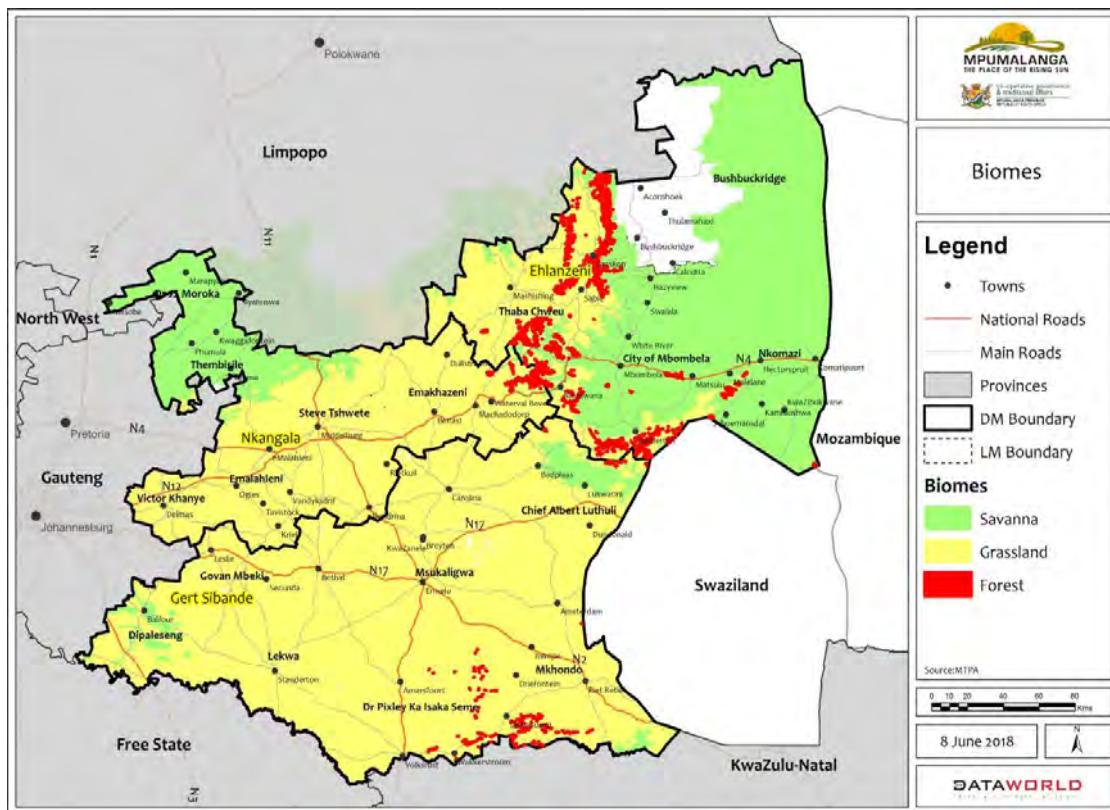


Figure 5-4: Forestry Areas in Mpumalanga

Again, the responsibility of the roads authorities in the province is to ensure that the road system that services the forestry industry is of such a standard that their logging operations can be done seamlessly.

5.2.7 Electricity Generation

Due to its large coal deposits, the generation of electricity through coal-fired power plants in South Africa takes place primarily in Mpumalanga. Of the 24 power generation facilities owned by Eskom in the country, 13 are coal-fired power stations. Eleven of the currently operational coal-fired power stations in the country are situated in Mpumalanga and contribute roughly 76% of the total electricity generated in South Africa. In addition, the three Eskom return-to-service (RTS) coal-fired power stations are also situated in Mpumalanga.

The use of coal for energy production results in both the primary environmental impacts associated with the mining and removal of coal for use in coal fired power stations in the province, as well as the secondary impacts resulting from the burning of this coal for energy production.

Mpumalanga is also a beneficiary of the Eskom expansion programme with a new Eskom mega power station, named Kusile, is under construction. (At Kusile there is already four of the six units in the production phase.)

Table 5-1: Eskom Power Stations in Mpumalanga

Location	Name of Station	Type	Base load/ Nominal capacity
Middelburg	Arnot	Coal-fired (Operating)	2 352 MW (1 x 370 MW, 1 x 390 MW, 2 x 396, 2 x 400 MW)
Witbank	Duvha	Coal-fired (Operating)	3 600 MW (6 x 600 MW)
Hendrina	Hendrina	Coal-fired (Operating)	2 000 MW (8 x 200 MW, 1 x 195 MW, 1 x 170 MW)
Witbank	Kendal	Coal-fired (Operating)	4 116 MW (6 x 686 MW)
Kriel,	Kriel	Coal-fired (Operating)	3 000 MW (6 x 500 MW)
Volksrust	Majuba	Coal-fired (Operating)	4 110 MW (3 x 657 MW, 3 x 713 MW)
Kriel	Matla	Coal-fired (Operating)	3 600 MW (6 x 600 MW)
Standerton	Tutuka	Coal-fired (Operating)	3 654 MW (6 x 609 MW)
Witbank	Kusile	Coal-fired (New Build)	4 800 MW
Ermelo	Camden	Coal-fired (Operating)	1 510 MW ((2 x 200 MW, 1 x 195 MW, 2 x 190 MW, 170 MW, 1 x 180 MW, 1 x 185 MW))
Balfour	Grootvlei	Coal-fired Operating	1 200 MW ((6 x 200 MW))

The transportation of coal for power generation has a major impact to the provincial road network especially in the Highveld. The following map indicates this phenomenon:

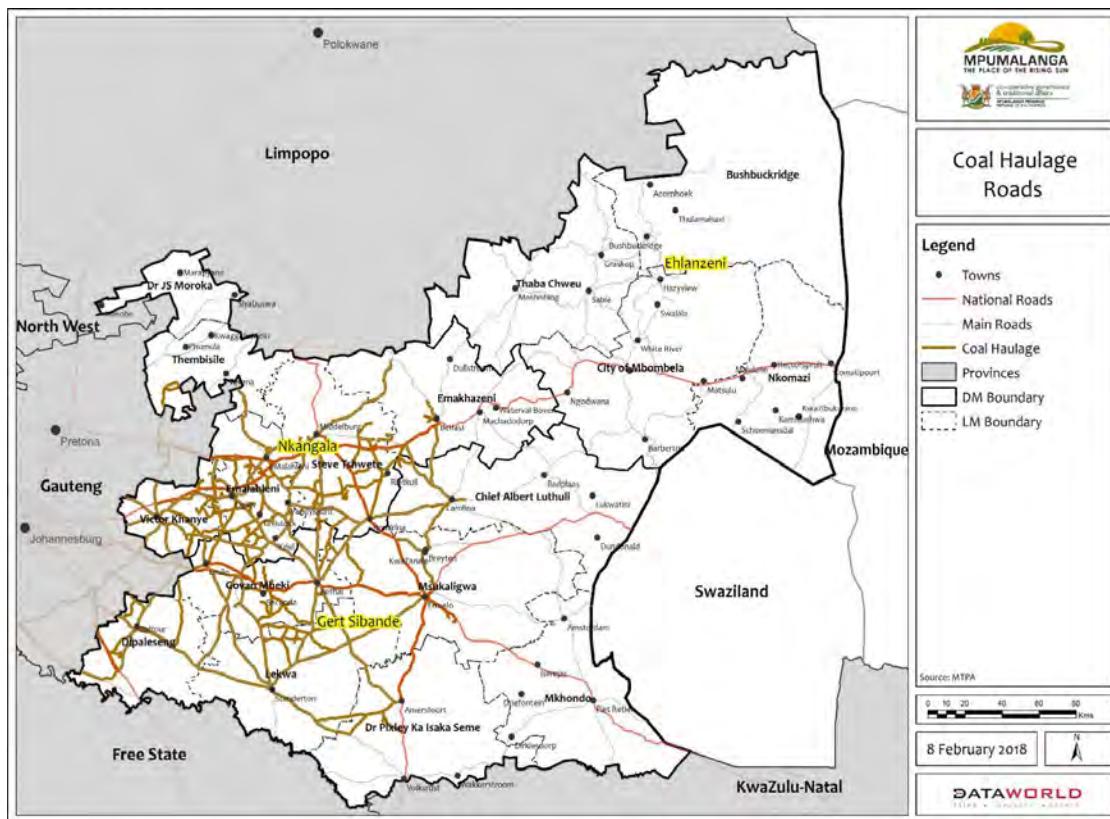


Figure 5-5: Coal Haulage Routes

To keep these roads in a good functional condition in order for coal haulage not to be affected to the various power stations is thus of national importance, let alone of provincial importance.

5.2.8 Economic Sectors and Growth Patterns

The importance of coal for power generation has already been described in the section above another industry of national importance is the vast Sasol synfuels plants and coal mines around the town of Secunda. Sasol produced a record volume of synfuel in 2017. Sasol has also spent R12 billion in expanding capacity of the synfuels plant and in installing an oxygen plant and more Sasol Advanced Synfuel reactors to convert gas feedstock into liquid fuel.

Fuel and gas are however mostly transported through a system of pipelines and no specific responsibilities are required here in terms of the PLTF.

The various important economic sectors and their relative strengths across the districts of the Mpumalanga province in terms of GVA and employment can be summarised as follows:

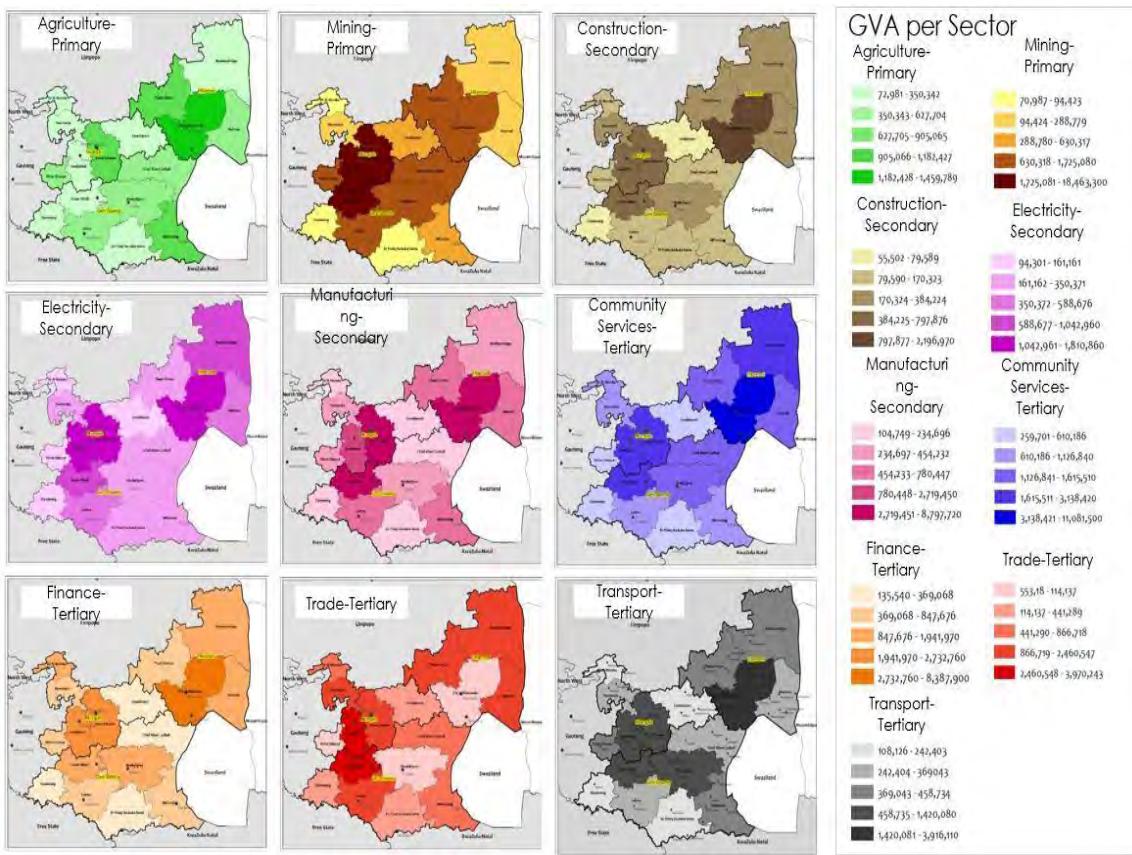


Figure 5-6: GVA per sector per district

The location quotient indicates the presence of comparative advantage of a sector within an area's economy. It is measured as the ratio of the percentage share of a sector in the area's economy to the share of the same sector in the national economy. An area is considered to provide comparative advantage to a specific economic sector if the sector's location quotient is greater than one. It is believed that a location quotient higher than one indicates the region's ability to produce the product or renders the service more efficiently. However, location quotient does not take cognizance of the latent potential of the economic sectors. Therefore, a sector's low location quotient value does not mean that the sector has no potential to flourish.

The Mining (1.65), Utilities (3.77) and Agriculture (1.52) sectors have comparative advantages in the province. It has also been observed that most of the local municipalities of Gert Sibande District held competitive advantage in the agriculture sector, municipalities of Nkangala District had advantage in the mining sector, and municipalities of Ehlanzeni districts held competitive advantages in agriculture, utilities and construction sectors.

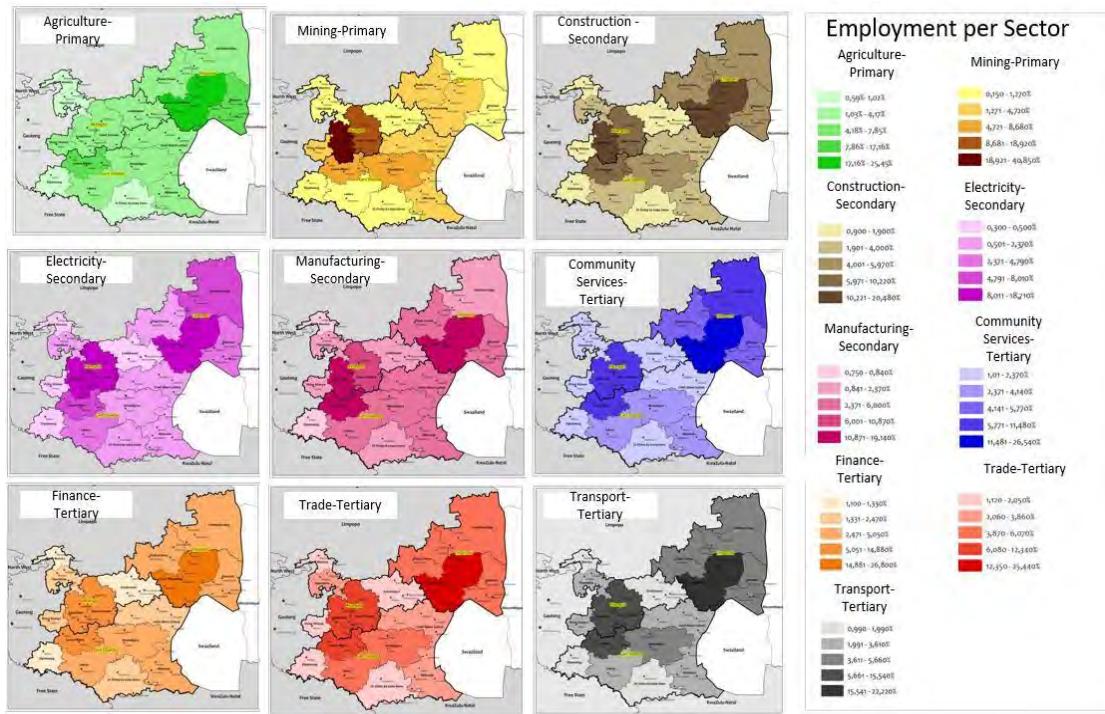


Figure 5-7: Employment per sector per district

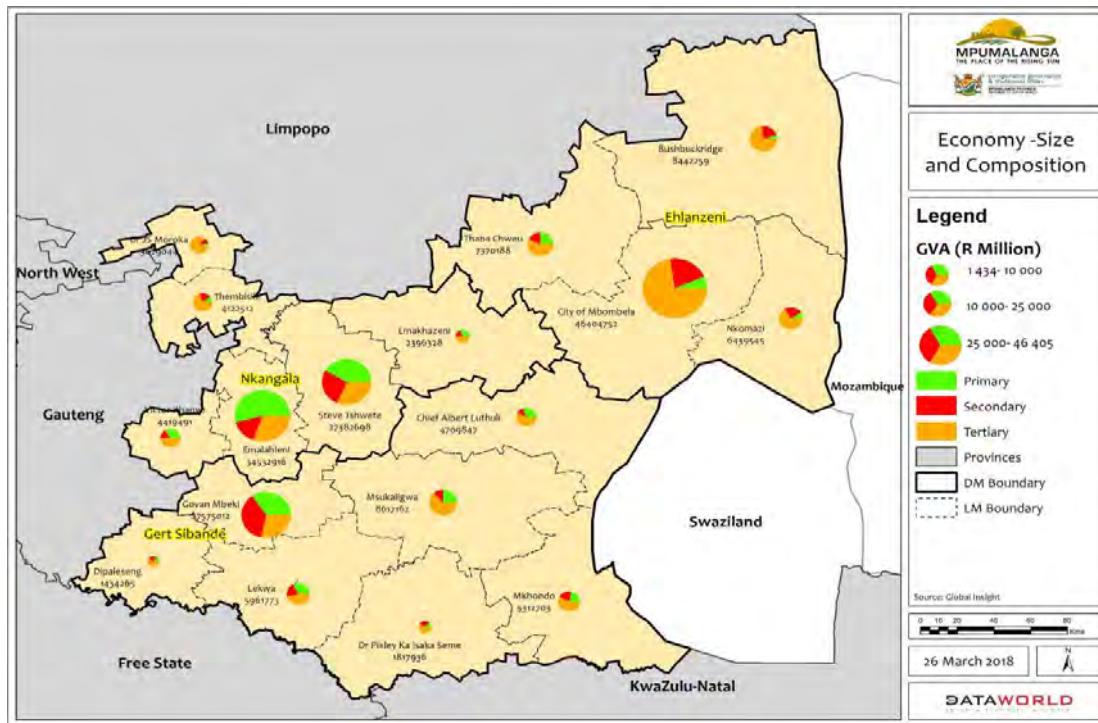


Figure 5-8: Economy- relative size per municipality

5.2.9 Rural Development

A large part of the Mpumalanga Province can be classified as rural areas. Rural communities in the Mpumalanga Province are still characterized by poverty, inequality, limited access to basic social infrastructure, underdevelopment, and lack of economic opportunities and incoherent spatial patterns. These rural communities mainly rely on subsistence farming for food and income. Due to the increasing pressures on the environment and degradation of land, which puts pressure on their livelihoods, the majority of the people are poor and have no land. There is thus a focus on the overall rural development on homogeneous functional regional areas identified according to factors, such as: unique environmental and climatic conditions, land ownership profile (communal land areas), and areas of high population concentration or unique settlement function.

More than 50% of the Mpumalanga population still reside in areas formerly designated as homelands. The homeland policies of the past had left Mpumalanga with a large rural population with a weak socio-economic profile removed from economic activities and basic and social infrastructure.

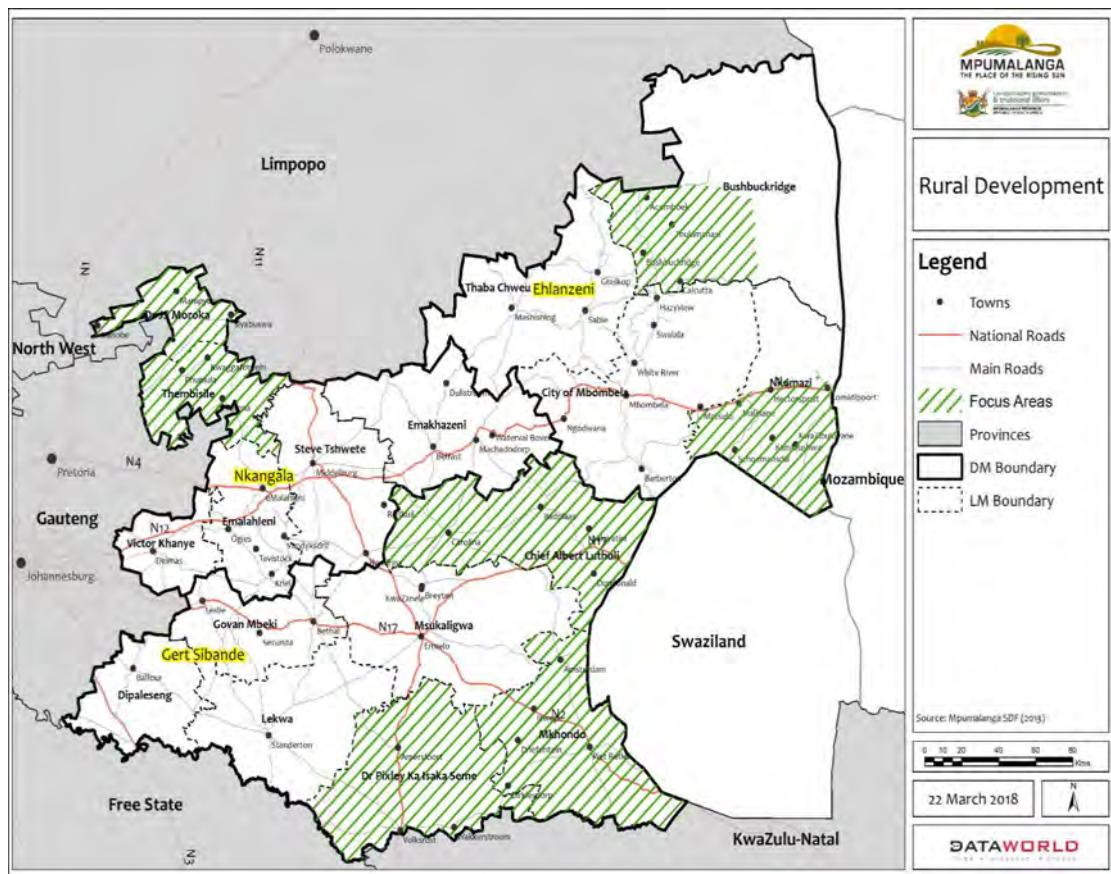


Figure 5-9: Rural Areas in Mpumalanga

The vision 2030 of Mpumalanga envisages agrarian transformation in the deep rural areas of Mpumalanga in line with the objectives of the Comprehensive Rural Development Programme. Agrarian transformation in this context aims to facilitate the transition from predominantly subsistence farming to commercial small-scale farming in these rural areas.

Additionally, the rural hinterland should also be utilised to promote conservation of environmentally sensitive areas in Mpumalanga. Moreover, such conservation areas can be utilised as tourism precincts to promote local economic activity, and to ensure the sustainable utilisation of these resources in the province. In rural areas the most important principle should be to promote agrarian transformation in order to transform these areas from subsistence farming to commercial farming areas. Such an approach will contribute significantly towards improved food security and economic empowerment. The proximity to markets could also act as incentive to local small farmers to increase agricultural production in the surrounding rural areas thus contributing towards agrarian transformation and economic empowerment.

Obviously in terms of transportation policy, the access roads to the rural areas, and also within the areas, need to be of a sufficiently high standard that these proposed agri- economies will be able to prosper.

The following are opportunities for rural transformation:

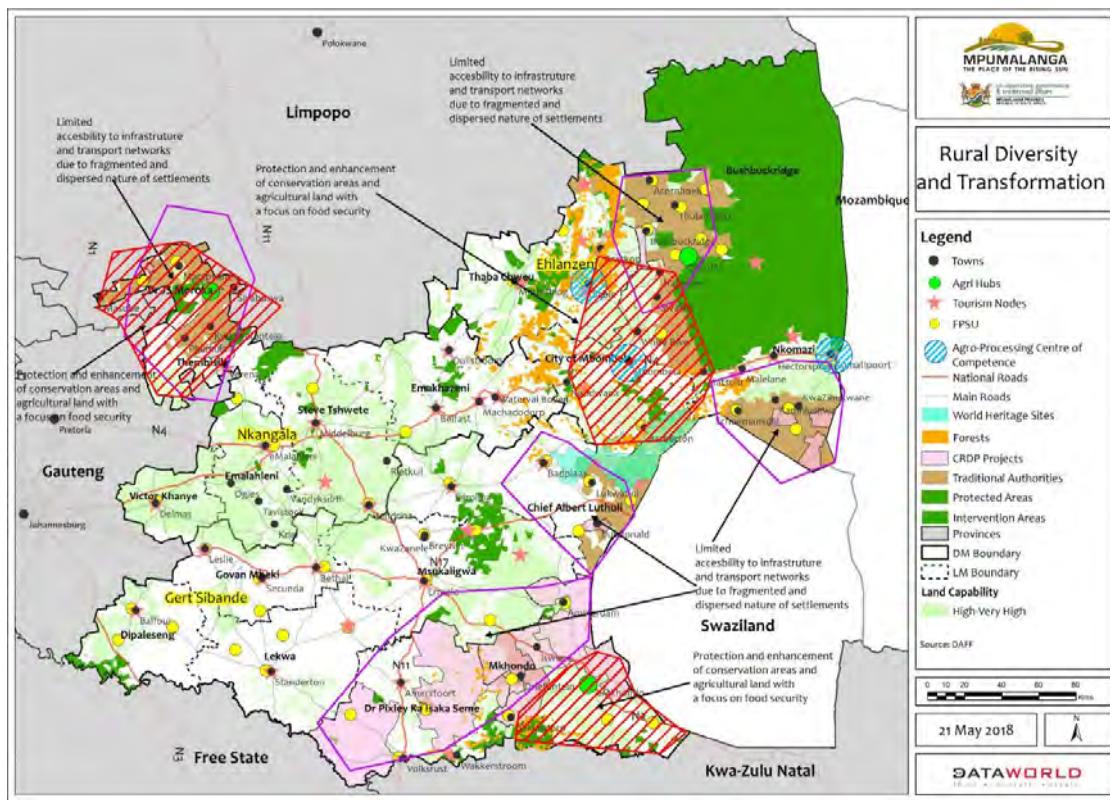


Figure 5-10: Rural Diversity

5.2.10 Tourism

Tourism is of such importance in the Mpumalanga Province that a separate chapter is allocated to the tourism strategy in the PLTF. In this section however, the link to the provincial spatial development framework will be discussed:

Mpumalanga is one of South Africa's top tourist destinations. People are drawn to Mpumalanga by the magnificent scenery, by the fauna and flora. It is home to the world's most famous game reserve, the world's third-highest canyon, and the world's oldest cave surrounded by the world's best private game lodges. The province is popular with tourists all year round. The scenic beauty of this region, with its endless Bushveld plains teeming with wildlife, with hundreds of spectacular waterfalls and vast stretches of emerald-green forests, and its colourful history, and ancient legends never fails to capture the imagination. The establishment of Kruger National Park in 1898 for the purpose of protection of wildlife found in the Lowveld, has evolved to become a major tourist attraction.

The region is abounded with all types of activities ranging from game viewing, nature reserves, hiking and paragliding including scenic drives across the valley and mountains of the vast Drakensberg escarpment that traverses through Mpumalanga. The province is innate to historical sites and pioneers, heritage and cultural villages that add much character and aesthetics to the nature of Mpumalanga.

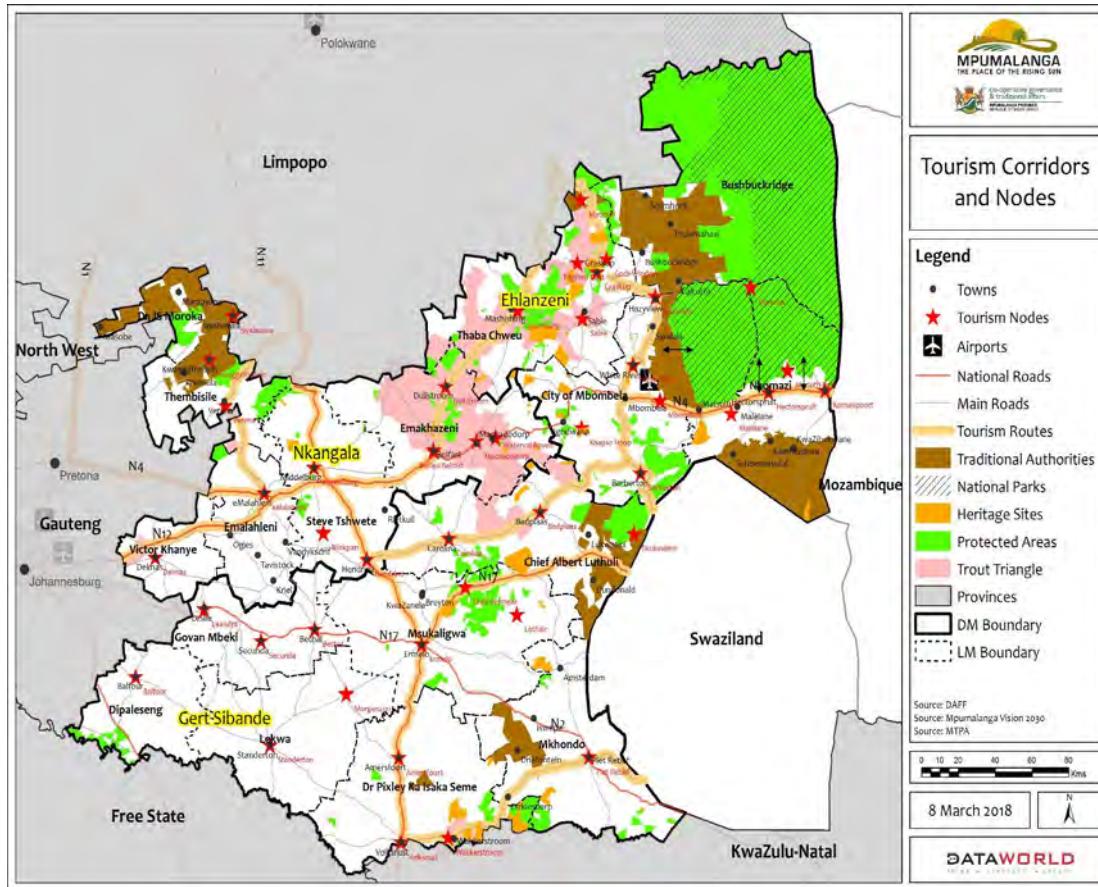


Figure 5-11: Tourism Corridors and Routes

In terms of the PLTF it is thus important the tourism corridors be prioritised in terms of upgrading and maintenance.

5.2.11 Spatial Structure and Settlement Patterns

The Spatial Structure and Settlement Patterns has an obvious influence on transportation in the province as it is the activity nodes that is the drivers of transportation links between them.

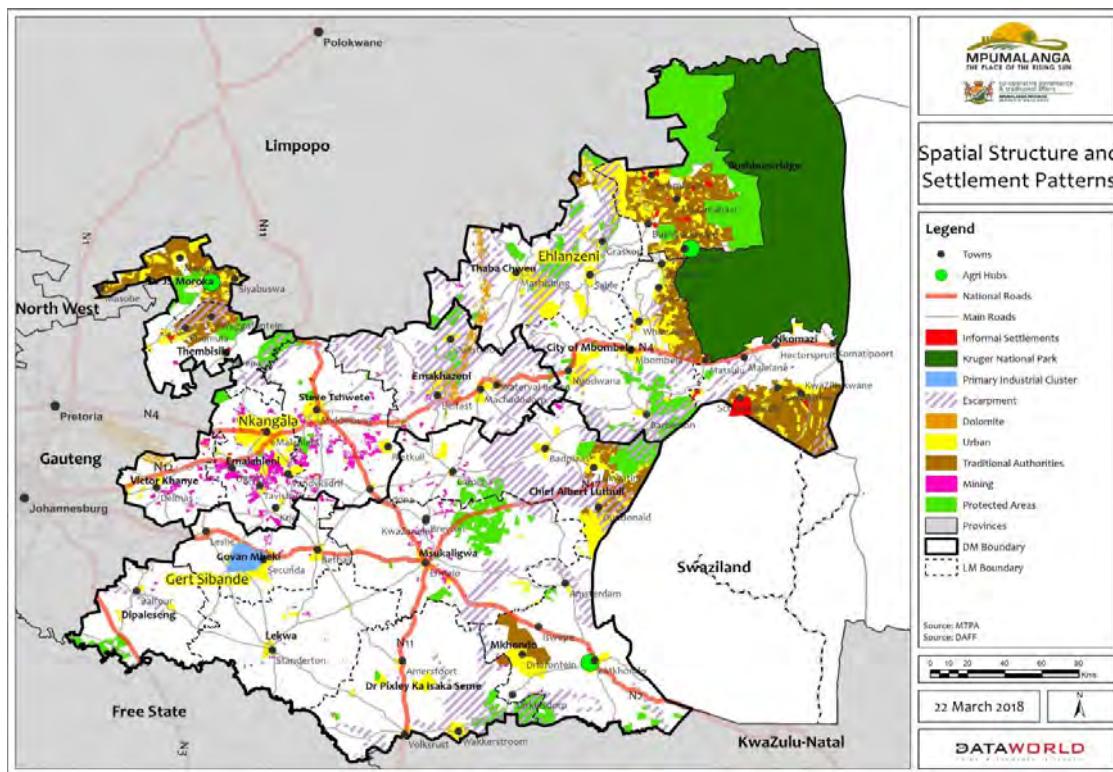


Figure 5-12: Settlement Patterns in Mpumalanga

The five major Primary Activity Nodes in the province are identified as follows (Witbank/Emalahleni, Middelburg, Mbombela, Secunda, and Ermelo) all of which are well located along the two most important transport/development corridors in Mpumalanga (the N4 corridor and the N17-N2 corridor).

However, the five Primary Activity Nodes are well-supported by a total of smaller, Secondary Nodes which perform as economic and social service centres to local residents of the towns, as well as surrounding rural communities, such as: (Delmas-Victor Khanye, Standerton, Bethal, Belfast, Mashishing-Lydenburg, Siyabuswa, Bushbuckridge, Barberton, Komatiport and Mkhondo).

The rural nodes are the areas which currently serve as central service points to surrounding rural areas and are mostly located in areas under traditional authority. Thus the following namely (Acornhoek Badplaas, Coalville, Marapyané, Mpuluzi, Sundra, Graskop, Amersfoort, Balmoral, Morgenzon, Davel, Lothair, Dullstroom, Pilgrims Rest, Greylingstad, Sheepmoor, Schagen, Magudu, Uthokozani, Shongwe Mission, Nsikazi, Kaapmuiden, Louw's Creek, Ga-Rankuwa, Bamokgoko, Stofberg, Evander, Elukwathini, Langkrans, Moolman, Oshoek, Jericho and Val) are rural nodes that can serve as incentives of rural service delivery nodes to local small farmers to increase agricultural production thus contributing towards agrarian transformation.

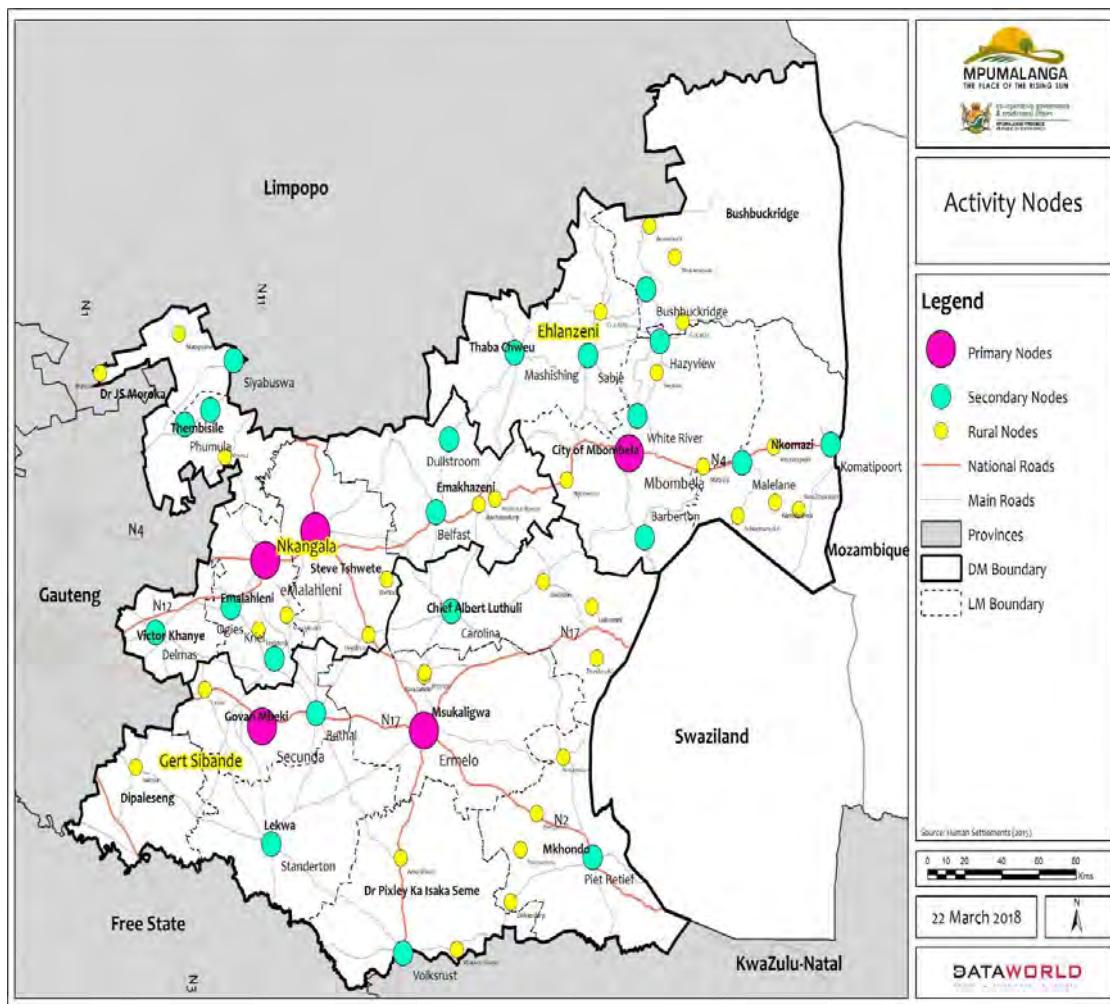


Figure 5-13: Types of Activity Nodes

5.2.12 Housing and Strategic Development Areas

The CSIR human settlements typology (2013) has also been reviewed as part of the spatial structure analysis of the Mpumalanga Province. The document outlines the various functional and hierarchical typologies of South Africa's settlements and how they relate to each other with regards to issues, inter alia, government and economic service provision as well as resource allocation. The typology is as follows:

Table 5-2: Settlement Typology

Area / Region	Population / Index
Provincial Land Transport Framework	SMEC Internal Ref. BG426
Mpumalanga Provincial Land Transport Framework (MPLTF)	17 March 2025
Prepared for Department of Public Works, Roads, and Transport – Mpumalanga Province	Page 108

City Region Areas	Population >1million,
City Areas	Population 500 000 – 1million
Regional Service Centre's	Regional Centre 1 Population 300 000 -500 000
	Regional Centre 2 Population 100 000 - 300 000
	Regional Centre 3 Population 40 000 - 100 000
Service Town	Population mostly >20 000
Local and Niche Towns	Population size varies widely
High Density Settlement Areas	Rural Nodes in High Density Settlement Areas

In terms of this typology the settlements in Mpumalanga defined as detailed below:

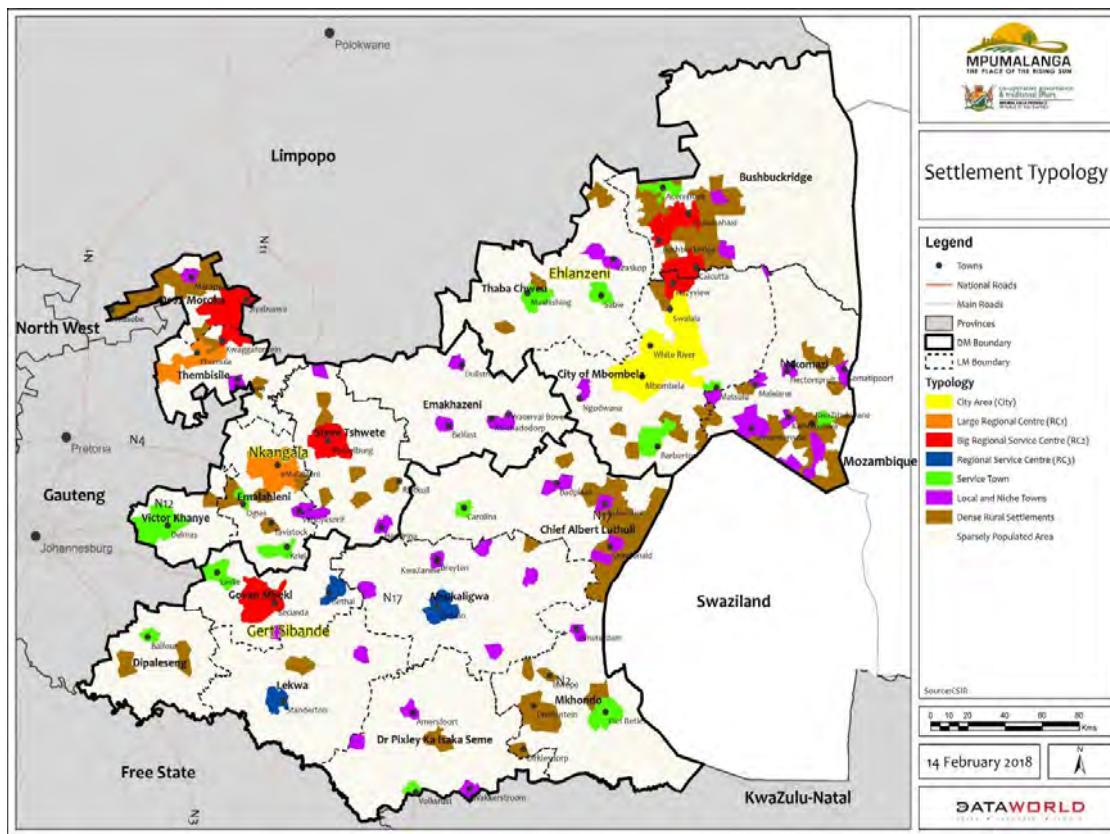


Figure 5-14: Settlement Typology

As part of the Mpumalanga Sustainable Human Settlement Master Plan an assessment was made of all of vacate land in the province which could accommodate future housing projects. These areas are areas that the municipalities have earmarked in their municipal SDF's and Precinct Plans as "Development Zones" for future development growth (i.e. urban renewal/ urban regeneration) and are located within the urban edge. The Human Settlement Master Plans calls these areas and/or Strategic Development Areas (SDA), these areas therefore inform the proposed housing priority areas in the province.

Ehlanzeni District has the largest percentage of land earmarked as SDA those areas are located in the Bushbuckridge Municipality with 14 646 hectares, City of Mbombela about 9 832 hectares of land, Nkomazi (3 927 hectares) and Thaba Chweu 4 749 hectares of land was identified for future human settlement development, which was allocated to meet the short to medium terms demand.

Gert Sibande District has about 13 485 hectares of land earmarked as SDA in SDF's of local municipalities. The largest portion of this land (3 918 hectares) is located in the Govan Mbeki Municipality while Msukaligwa (2 877 hectares), Pixley ka Seme (2 588 hectares), and Mkhondo (2 440 hectares) each have large amounts of land allocated for future human settlements. The Albert Luthuli Municipality reserved about 1 524 hectares of land, while Lekwa Municipality has the smallest amount with only 138 hectares.

Nkangala District has identified about 22 119 hectares of land for future SDA, and that these areas could collectively accommodate about 331 788 residential units at an average density of 15 units/ha. This is more than

sufficient to accommodate the current demand (73 490) and projected demand (47 625 subsidised units and 172 868 bonded units).

Emalahleni Municipality earmarked about 7 029 hectares, followed by Thembisile Hani (6 542 hectares), Dr JS Moroka with 3 032 hectares and Victor Khanye with 2 833 hectares. Emakhazeni has identified 1 107 hectares and Steve Tshwete with 1 576 hectares of land for human settlement development.

The demand for housing in each of these areas are depicted below:

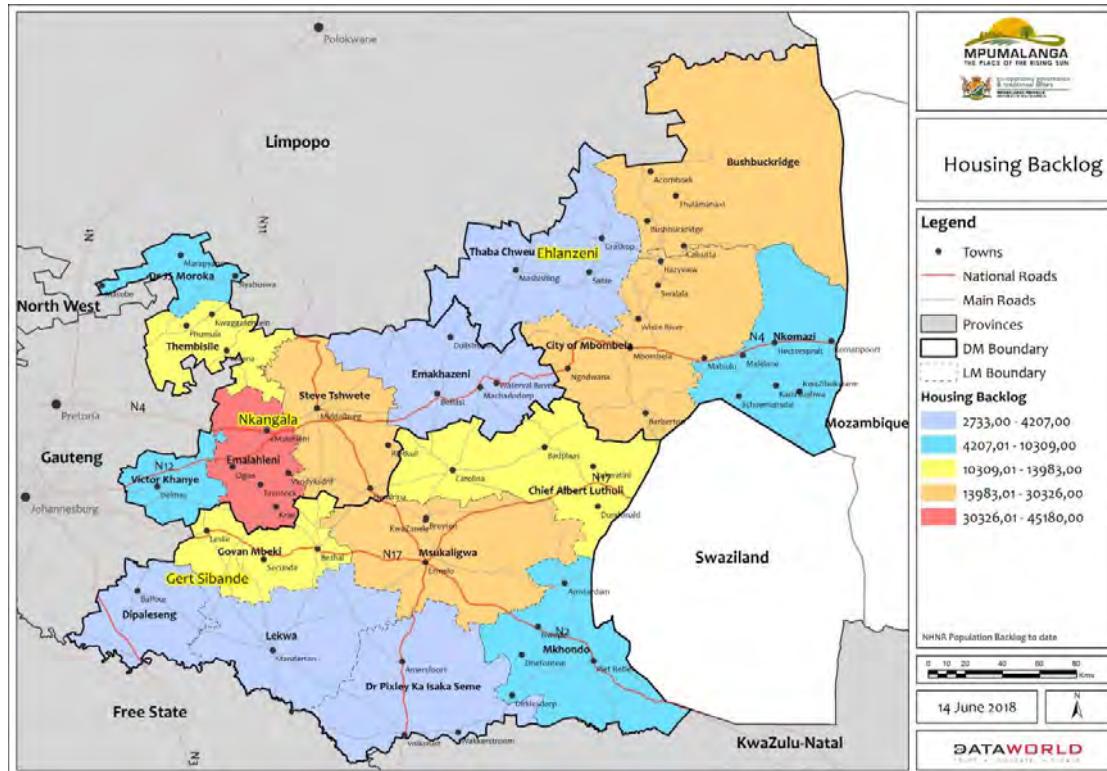


Figure 5-15: Housing demand per municipality

The provision of housing should however never be viewed or planned in isolation in terms of its requirements are aspects, such as new access roads, internal circulation routes, non-motorised transport infrastructure, public transport infrastructure, as well as public transport operators to provide services. The PLTF should therefore provide guidance in terms of providing these services.

5.2.13 Spatial Pattern and Growth

Mpumalanga is predominantly a rural province. The City of Mbombela is the provincial capital and a major urban centre. The other key urban centres are Emalahleni, Middleburg, Ermelo and Secunda. The province mostly comprises a range of smaller towns. Large parts of the north-western, north-eastern and southern extents of the province comprise extensive and predominantly small, scattered rural villages as part of traditional authority areas.

The N4 (Maputo Corridor) is a strong structuring element in the province, as many of the larger cities and towns in the province are situated along or near this corridor. With regards to the settlement pattern of the province it is evident that, there is clustering of major towns around transportation corridors and high order nodes. The clustering of towns varies due to the topographical features and that the traditional settlement areas are normally linked by a single access or provincial road.

With regards to, activity nodes, the province is characterised by Primary (which represent the largest towns and cities in the province), Secondary (which include a range of the smaller towns) and Rural (which are principal points around which to consolidate social and economic infrastructure in the rural parts) activity nodes.

Urban restructuring and urban renewal addressing the spatial development pattern and profile of Mpumalanga in line with the principles of the Urban Development Framework that developed because of:

- The Existing Biodiversity and Unique Landscape,
- The Existing Rich Mineral Resources and The Mining Activities,
- The Inherent Agricultural Potential,
- Political Reasons Forming Separated Communities in Towns and Homelands,
- The Network of Roads, Railways and Economic Infrastructure.
- Rehabilitated mining towns hold the opportunities for housing and spatial integration.
- Public transportation and proposed BRT networks hold potential for densification and intensification of residential development.

The establishment of social/community facilities in the form of Thusong Centres in existing urban activity nodes/business areas will not only ensure convenient, one-stop social services to communities in the urban parts of the province, but also promote economic development as it adds to the diversity of facilities and services provided in these areas.

The province experiences an unbalanced distribution of the population and economy in terms of the contributions of the three districts to the provincial population and economy in terms of GVA. The development levels and socio-economic profiles of the population can directly be linked to the population and economic concentrations where high levels of population concentration exist with low levels of economic contribution indicating limited investment and linkage to markets.

- Spatial patterns display a high degree of fragmentation in terms of the dispersed nature of development and the poor linkages and integration between urban and rural areas.
- Impact of migration on housing and infrastructure backlogs in the province.
- All of this is depicted in the map below:

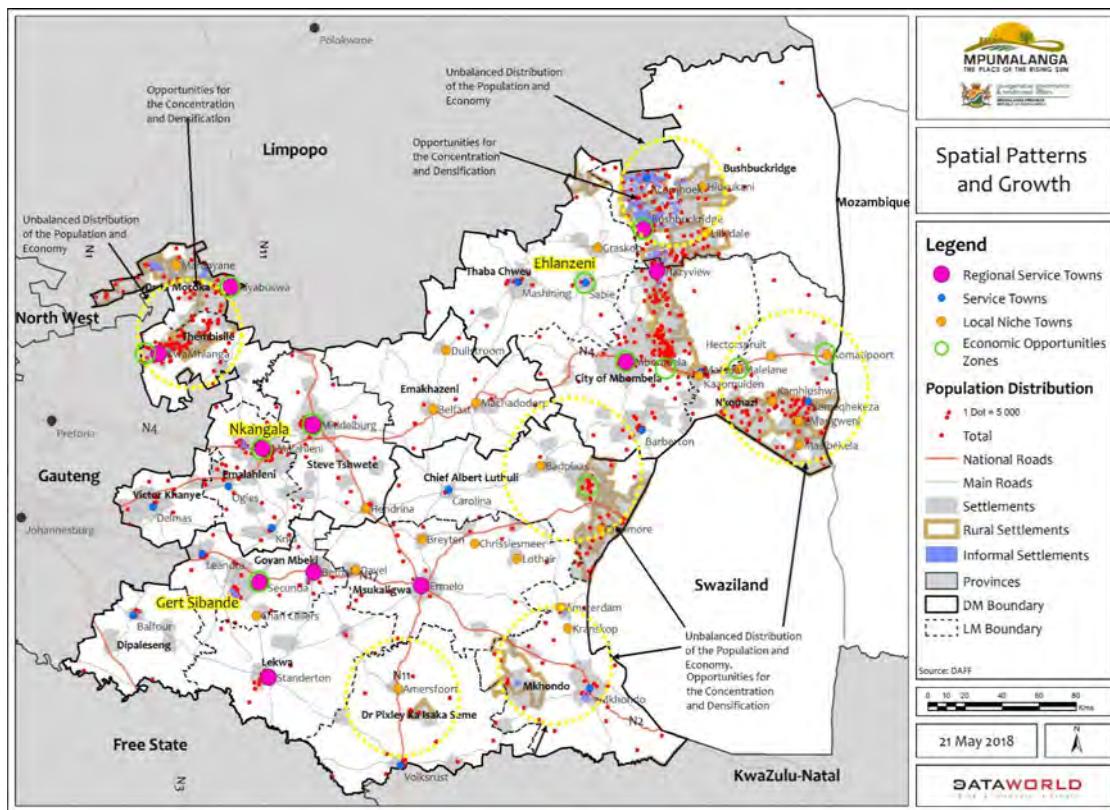


Figure 5-16: Spatial patterns and growth

In terms of the PLTF it is necessary to take cognisance of the transportation implications of these planning efforts.

5.2.14 Economy and Areas of concentration

Mpumalanga currently has an estimated population of 4 444 210 people which accounts for 7.86% of South Africa's total population. Highest population concentrations in the province are in Bushbuckridge LM, City of Mbombela, Emalahleni LM, Steve Tshwete LM, Dr JS Moroka LM, and Thembisile Hani LM.

The Ehlanzeni District contributes 40.5% towards the provincial population, followed by the Nkangala District (29.2%), and the Gert Sibande District (26.2%). The population growth rate of both Nkangala DM and Ehlanzeni DM were lower between 2011 and 2016, compared with the growth rates they registered during 2001-2011. However, Gert Sibande DM is the only district that has registered a higher population growth rate.

Among the districts of Mpumalanga, Nkangala contributes the most (approximately 37%) towards the provincial GDP and Ehlanzeni and Gert Sibande, adds about 35% and 28% respectively to the provincial GDP. In terms of the sector contribution, the tertiary sector, contributes 50.5%, is the most dominant sector, the primary sector's and secondary sector's contributions make up about 27.7% and 21.8% respectively to the provincial economy. The Mining (1.65), Utilities (3.77) and Agriculture (1.52) sectors have comparative advantages in the province.

The following opportunities for economic growth exists:

- Redefined settlement / nodal typology for the province.
- Business and commercial development should be promoted in specific nodes where the comparative advantage supports the economic sectors in the province.
- Redefine and identify the areas earmarked by the Mpumalanga Industrial Development Plan.
- The mining, petrochemicals, steel and forestry sectors are dominated by a few global-level companies, with relatively few job opportunities being created due to their capital-intensive nature.
- The province shares its western border with Gauteng- the largest economic region of Africa. The presence of such a strong economic hub in the vicinity provides the province with the opportunity to grow economically, especially in the areas adjoining Gauteng.

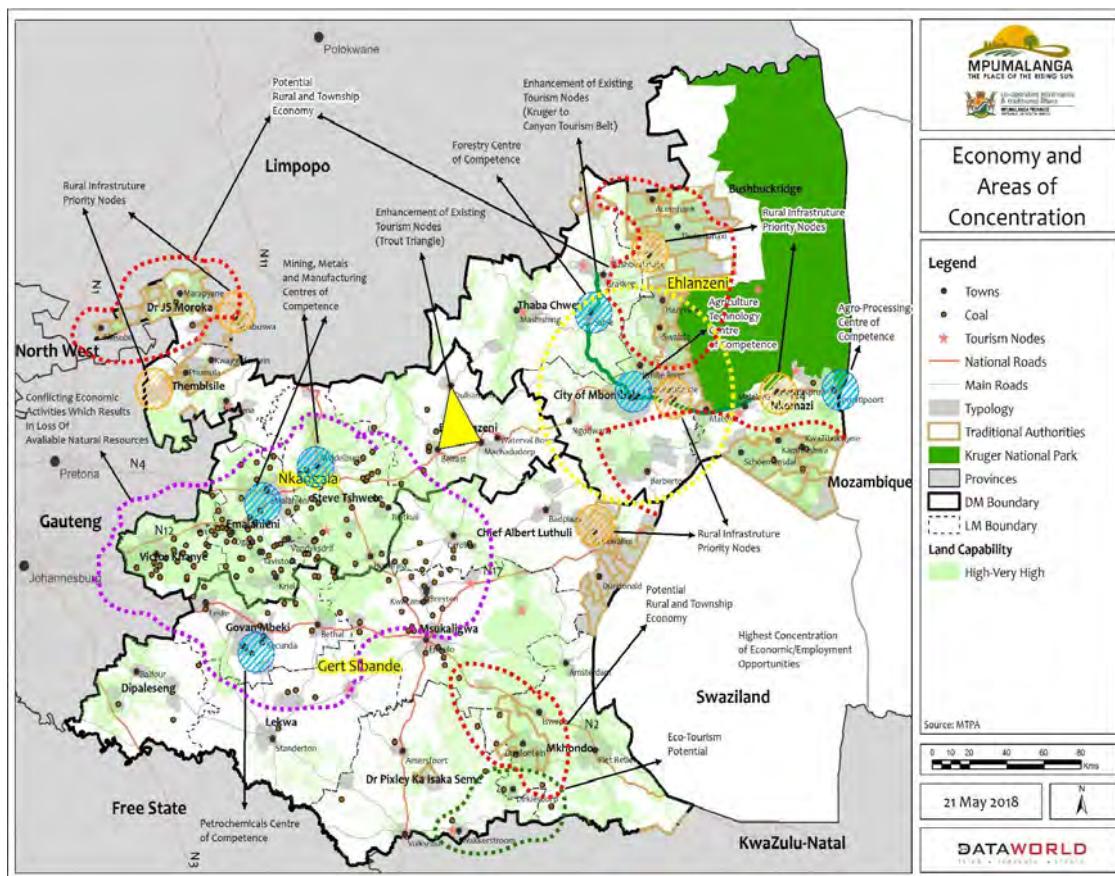


Figure 5-17: Economy and areas of concentration

The transportation implications of all of the above need to be assessed and should be addressed in the integrated transport plans of the province.

5.2.15 Transport Movement Services

The section aims to provide a brief overview of the transport infrastructure and services in the province to provide the basis to identify the spatial development challenges and opportunities in relation to transport.

Transport Infrastructure is made up of transport network elements and facilities. The transport network includes road-based, rail-based and air-based infrastructure to enable the mobility of people and freight.

The transport facilities would typically include passenger and freight railway stations, road-based logistics facilities and hubs, airports, cross-border nodes, etc.

The road network in Mpumalanga has been developed and managed through three spheres of government:

- National Roads – managed by SANRAL on behalf of the National Department of Transport.
- Provincial Roads - managed by Mpumalanga Department of Public Works Roads and Transport.
- Local Municipal Roads and Streets – managed by district and local municipalities.

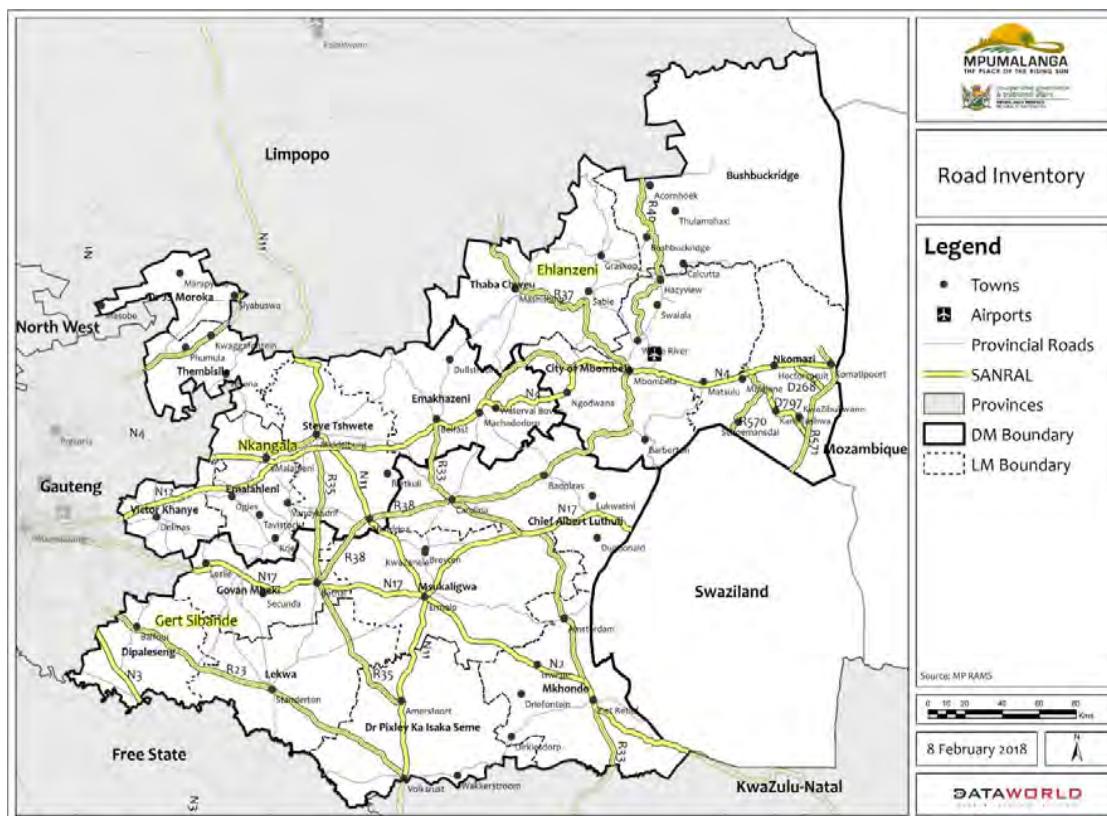


Figure 5-18: SANRAL Roads

The roads in South Africa are categorized into six classifications, but for this provincial SDF, three major road classifications are considered:

- Primary Distributors or Class 1 roads: These roads provide high mobility with limited access for rapid movement of large volumes of people, raw materials, manufactured goods and agricultural produce of national importance. The roads serve regions, provincial capitals, key cities, major city nodes, adjoining countries and major freight and passenger terminals.
- Regional Distributors or Class 2 roads: These roads are relatively high mobility roads with a lower level of access for the movement of large volumes of people, raw materials, manufactured goods, and agricultural produce of regional importance in rural and urban areas. These public roads are between provincial capitals, large towns and municipal administration centers.
- District Distributors or Class 3: These roads have a higher level of access for the movement of people, raw materials, manufactured goods, agricultural produce in rural and urban areas. In addition, these roads provide moderate mobility in a region.

The other types of road characteristics are as follows:

- District Collector
- Access Roads
- Non-motorized Accessways

Mpumalanga is directly linked with an integrated system of economic development corridors supporting regional, provincial and socio-economic development. The various regional service centres are connected to the neighbouring provinces and countries through national corridors as shown in the figure below. The corridor that is directly affected by economic development:

- The Maputo Development Corridor (MDC) as part of the Coast 2 Coast Corridor (C2C) attracting the public as well as private investment.

There are three major National corridors in Mpumalanga, such as the N4 or Maputo Corridor, N17/N2 Corridor, N11 Corridor.

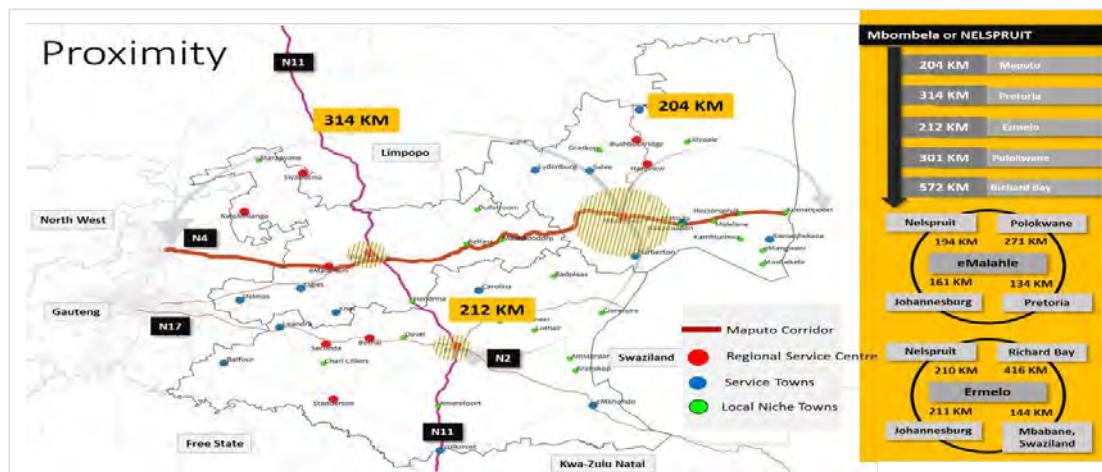


Figure 5-19: Cities Proximity

The Maputo Development Corridor is an economic transportation corridor linking Gauteng and the Maputo harbour. The Maputo Development Corridor passes through Nkangala and Ehlanzeni Districts supporting the Maputo railway line. The corridor provides access to 8 local municipalities and their connected towns within the

direct range. The corridor serves 48% of the total Mpumalanga population which is approximately 2.06 million people and accommodates 64% of the provincial economy.

The N17/N2 corridor serves as access corridor between South Africa and eSwatini along with the coal haulage corridor to Richard Bay. Around 20% of the Mpumalanga population is served through the N17/N2 corridor which is approximately 844 206. The corridor provides 23% of the provincial economy with 1.3% growth per annum. As per the proposed Govan Mbeki Secunda IDZ, economic activity node, which is a part of petrochemical cluster provides an opportunity for the production of petrochemical, chemicals, speciality chemicals and any supporting cluster.

The N11 is an intersecting corridor of N4 and N17/N2 at Middelburg and Ermelo and linking Limpopo and KwaZulu Natal. The corridor serves the 21% of the provincial economy and also mainly caters to local economies of Steve Tswete and Msukaligwa local municipalities. The corridor is accessed by 16% of the total Mpumalanga population and employs 20% of the population as shown in the figure below.

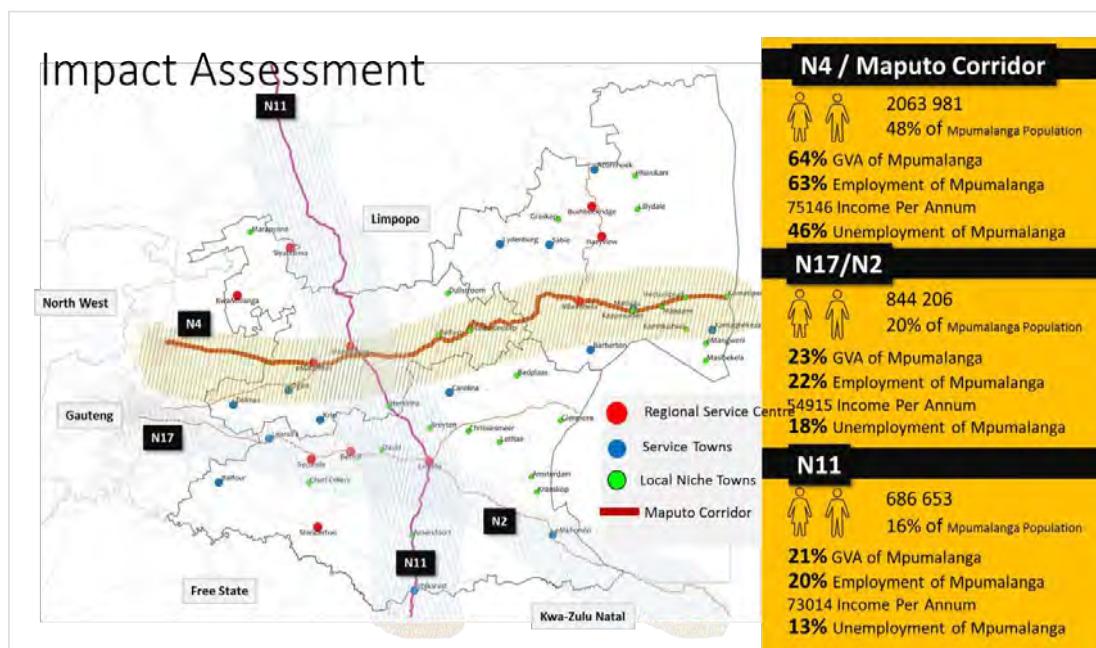


Figure 5-20: Corridor Impact Assessment

The following are major roads of connectivity and accessibility in the Mpumalanga Province:

The R33 is a connecting road from Lephalale to Pietermaritzburg, and the R33 route is connecting Limpopo and KwaZulu-Natal through various parts of Mpumalanga.

The R35 is one of the provincial routes of Mpumalanga, connecting Amersfoort with Middelburg. It serves two major towns namely Middleburg and Bethal. Further, it is connected with N17 at Bethal and N4, N11 at Middleburg. It is one of the major routes for connecting two district municipalities in Mpumalanga (Nkalgala and Gert Sibande).

The R36 is a provincial route connecting Bandelierkop in Limpopo to N17 in Ermelo. The R36 intersects N4 at Patattanek and Machadodorp, R33 in Carolina and finally to N17 at Ermelo.

The R37 is a major provincial route connecting Polokwane to Nelspruit. It is connecting two major cities and serving Limpopo and Mpumalanga province.

The R538 is a regional route in Mpumalanga intersecting R40 in Hazyview and N4 between Nelspruit and Kaapmuiden.

The R570 is intersecting N4 in north at Malelane gate of the Kruger National Park and in the south connecting Swaziland.

The R573 Moloto road is managed by SANRAL which serves as an important economic route, connecting Gauteng, Mpumalanga and Limpopo.

All of these routes are depicted in the map below:

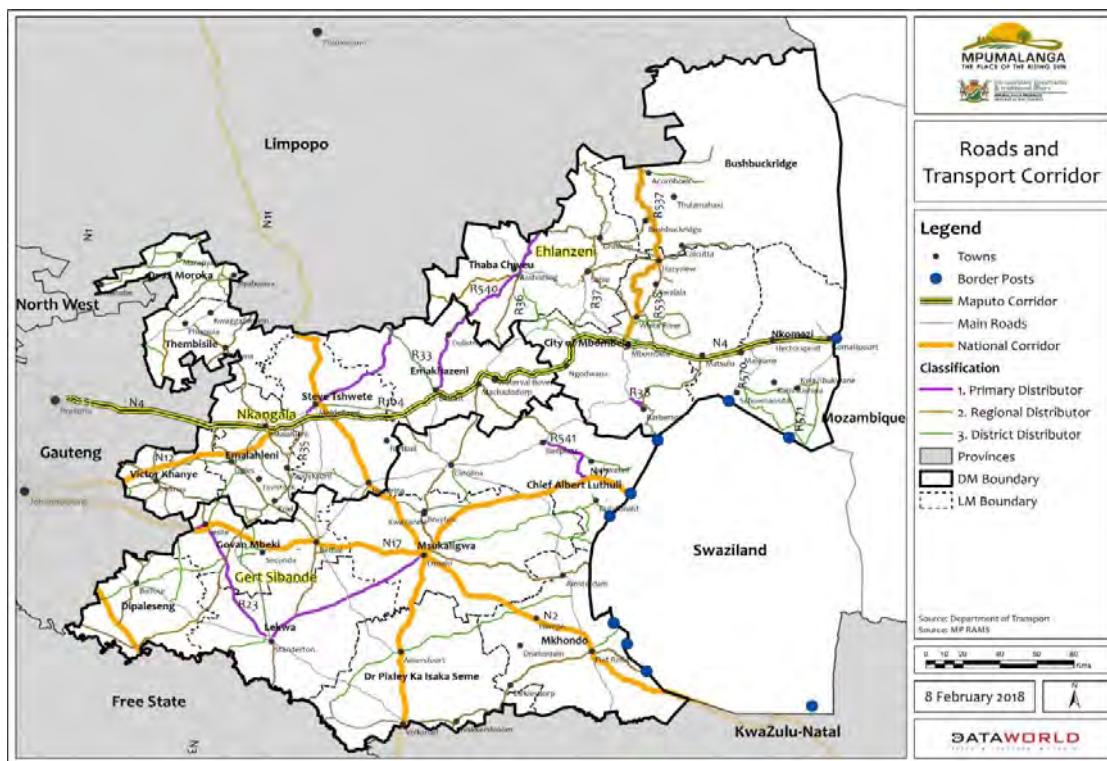


Figure 5-21: Roads and Transport Corridors.

5.2.16 Movement, Connectivity and Infrastructure

The road network in Mpumalanga is managed by various agencies of government such as SANRAL, provincial and local municipal bodies. SANRAL manages 2478km of the road network in Mpumalanga of the total 13 855km. The major regional linking is through N4, N17 and N2 roads connecting other provinces and Mozambique.

The major freight corridors are N4, N2, R570 and R571. Most of the coal haul roads are in Gert Sibande and Nkangala district due to the presence of coal mines. The most important rail networks serving the province are

Pretoria-Maputo and Johannesburg-Durban (portioned) line. Coal is the main freight movement mineral resource and carrying 7.4 million tons of provincial traffic.

The N4 Maputo Corridor, consisting of the N4 freeway and adjacent railway line, is the main link between the City of Tshwane and Maputo harbour. The N12 freeway links up with the N4 freeway just before Witbank and connects the City of Johannesburg and Ekurhuleni metropolitan areas with this corridor.

The N2/ N17 corridor links Gauteng with Richards Bay and Swaziland, provides an alternative route to Maputo and links up with the tourism initiatives within northern Swaziland and the Lebombo Tourism SDI, providing excellent regional and district accessibility. The N2/N17 corridor is supported by the coal haulage line to Richards Bay which provides mainly for the minerals and metals industry.

The N11 provides a regional corridor that will become more important with the development of the Waterberg coal reserves. The N11 provides interaction between the N1, N4 and N2/N17 corridors and will play a major part in the region as a transportation corridor to Richards Bay.

Focus on supporting Corridors and Roads - The R40 providing accessibility from the Maputo Corridor to Bushbuckridge supported by passenger rail and the Moloto passenger rail Corridor providing access to Thembisile Hani and Dr JS Moroka will assist in providing better accessibility between economic nodes and these large population nodes.

Accessibility between the former homeland areas in Nkomazi and the Maputo Corridor needs to be enhanced to make these areas accessible to the economic opportunities on the N4.

Komatipoort Dry Port Special Economic Zone SEZ is connecting N4 and strategic location for economic activity.

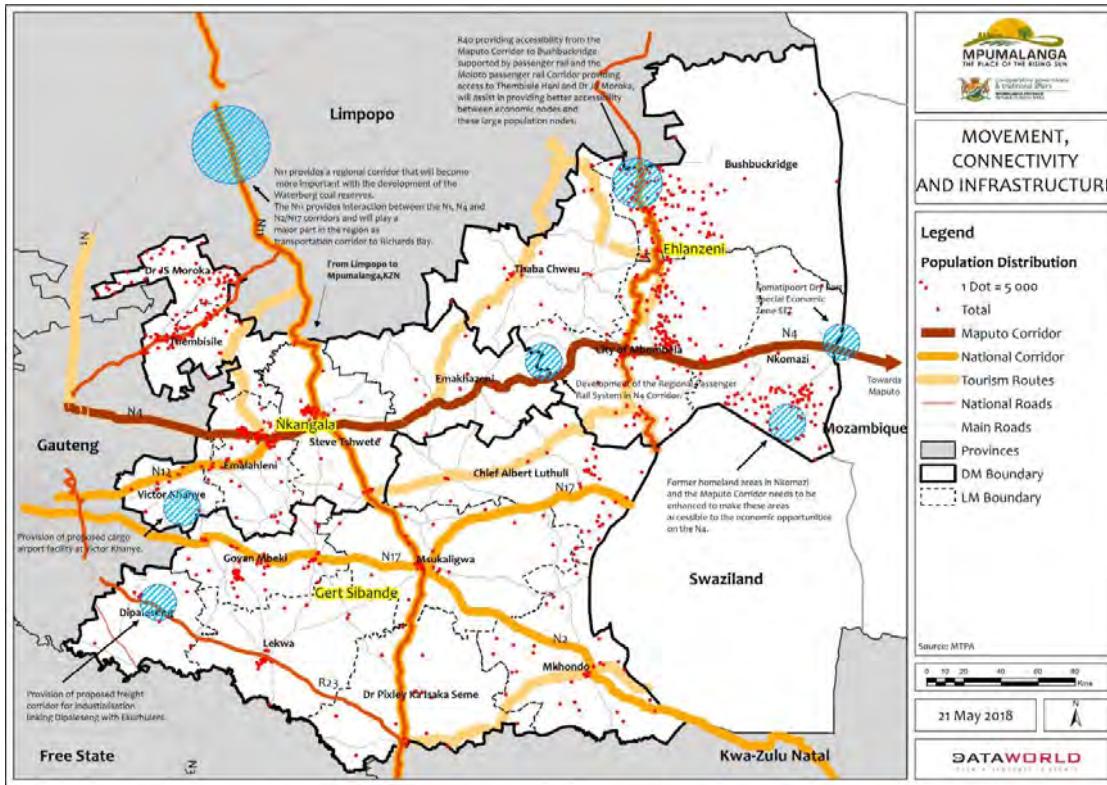


Figure 5-22: Movement, Connectivity and Infrastructure corridors.

5.3 Ehlanzeni DM Spatial Development Framework

5.3.1 Introduction

The Ehlanzeni District Municipality's SDF has been compiled as long ago as 2010. It implies that the provincial SDF are far more recent and thus represent later proposals also for the Ehlanzeni area. The Ehlanzeni document will thus only be scanned for projects of a provincial importance that has not been included in the provincial SDF.

It is also not the intention to provide details on proposals down to the district level in a provincial policy document, such as the PLTF.

5.3.2 Projects of note

Of specific interest in this document is a list of planning studies that were identified as necessary to enhance the development potential of the district. If these studies have not been completed yet, it should be budgeted for:

Table 5-3: Planning studies required for Ehlanzeni District Municipality

Area	Project
District wide	Regional Development Plan (Ehlanzeni, Swaziland, Mozambique, Limpopo, etc.)
District wide	District Rural Development Strategy
District wide	District Land Use Transportation Strategy
District wide	District Land Reform Study
District wide	District Social Services Study
District wide	District Local Economic Development Plan
District wide	District Environmental Management Framework
District wide	Social Housing Strategy
District wide	Services Contributions Policy
District wide	District land monitoring program
District wide	Guidelines for Resort Developments and Golf courses and Estates
District wide	District Rural Development Strategy
Mbombela, Bushbuckridge, SKNP and Nkomazi LM's	KNP Interface Development Plan
SKNP	Spatial Development Framework
SKNP	Waste Management Plan
Mbombela LM	Matsulu Neighborhood Development Plan
Mbombela LM	White River Neighborhood Development Plan
Mbombela LM	Swalala Neighborhood Development Plan
Mbombela LM	Kabokweni Neighbourhood Development Plan
Mbombela LM	Daantjie/Msogwaba Neighborhood Development Plan
Mbombela LM	Tekwane- Karino Neighborhood Development Plan
Mbombela LM	Social Housing Strategy
Nkomazi LM	Malelane Neighborhood Development Plan
Nkomazi LM	Komatipoort Neighborhood Development Plan
Nkomazi LM	Social Housing Strategy
Umjindi LM	Barberton Neighborhood Development Plan
Umjindi LM	eMjindini Neighborhood Development Plan
Umjindi LM	Social Housing Strategy
Umjindi LM	Rural Development Strategy
Thaba Chweu LM	Lydenburg/ Mashishing Neighborhood Development Plan
Thaba Chweu LM	Sabie/ Simile Neighborhood Development Plan
Thaba Chweu LM	Graskop Neighborhood Development Plan
Thaba Chweu LM	Pilgrims Rest Neighborhood Development Plan

Thaba Chweu LM	Leroro Neighborhood Development Plan
Thaba Chweu LM	Mathibidi Neighborhood Development Plan
Thaba Chweu LM	Mathibidi Neighborhood Development Plan
Thaba Chweu LM	Moremela Neighborhood Development Plan
Thaba Chweu LM	Social Housing Strategy
Thaba Chweu LM	Local Economic Development Plan
Thaba Chweu LM	Rural Development Strategy
Bushbuckridge	Sports Facilities and Recreation Development Strategy and Feasibility plans in Bushbuckridge Municipality
Bushbuckridge	Rural Development Strategy
Bushbuckridge	Wood Cluster Development Strategy and Plan: Bushbuckridge
Bushbuckridge	Tourism Plan for Bushbuckridge
Bushbuckridge	Agriculture Development Plan: Bushbuckridge Municipality
Bushbuckridge	Investigation: Urban Agricultural Projects
Bushbuckridge	Prepare Safety Plan for Bushbuckridge Municipality
Bushbuckridge	Investigation: Programme for the provision of Tertiary Education and Training Facilities
Bushbuckridge	Investigation: Programme for the provision ICT and early learning centres
Bushbuckridge	Investigation: Public and Private sector office accommodation and facilities in Major Nodes (Thusong Centre)
Bushbuckridge	Prepare Housing Plan for Bushbuckridge Municipality and prototype design low-cost multiple housing as part of the housing strategy.
Bushbuckridge	A master plan for the provision and conservation of open space and recreation as well as a tree planting strategy.
Bushbuckridge	Tourism Precinct Feasibility
Bushbuckridge	A Land Use Transportation Strategy
Bushbuckridge	Detail Urban Design (Thulmahashe)
Bushbuckridge	Detail Urban Design (Acornhoek)
Bushbuckridge	Street furniture/shelter design (Acornhoek)
Bushbuckridge	Street furniture/shelter design & implementation/ablution (Dwarsloop)
Bushbuckridge	Pilot Project Street furniture (Mkuhl)
Bushbuckridge	Detail Urban Design (Mkuhl)
Bushbuckridge	Detail Urban Design (Shatale)
Bushbuckridge	Detail Urban Design (Maviljan)
Bushbuckridge	Pilot Project Street furniture (Maviljan)
Bushbuckridge	Nyaka Dam Development Plan
Bushbuckridge LM	CBD Study
Bushbuckridge LM	District Local Economic Development Plan
Bushbuckridge LM	Spatial development Framework

5.4 Gert Sibande DM Spatial Development Framework

5.4.1 Introduction

The Gert Sibande District Municipality Spatial Development Framework has been completed in 2022 and is thus a more recent document than the provincial SDF. It is thus very necessary to analyse the projects and policies defined in this document.

The economy of the Gert Sibande District experienced the following trends in 2020:

- In 2020, the contribution to the Mpumalanga economy was 27.1% – smallest contribution among the three districts.
- Gert Sibande was the dominant role player in the provincial agriculture industry and made significant contributions to the provincial manufacturing and mining industries.
- Over the period 1996 to 2020, the economic growth rate for Gert Sibande was 1.0% p.a., however, it contracted by 0.6% p.a. between 2015 and 2020.
- Estimated contraction of between -6% & -7% in 2020 because of COVID-19 and the lockdown. Construction, transport and manufacturing are the most affected industries.
- Expected growth rate of roughly 5% in 2021 from a low base.
- The estimated average annual GDP growth between 2020 and 2025 for Gert Sibande is 2.3% p.a.
- In 2020, the size of the economy was estimated at R111.9 billion in current prices.
- In 2020, the four largest industries (mining, community services, manufacturing and trade) contributed 67.8% to the economy of Gert Sibande.
- Gert Sibande holds comparative advantages in mining, utilities, agriculture, and manufacturing.
- In 2015, tourism spend totalled R3.5 billion or equal to 4.0% of the district's GDP. In 2020, due to COVID-19 related factors, it decreased to only R1.3 billion, which was equal to 1.2% of the district's GDP.

5.4.2 Projects of note

5.4.2.1 Pipelines

Main pipelines forming part of the South African network which traverses the GSDM includes:

- The Lily Line which transports methane-rich gas from Sasol's Secunda plant to Kwa-Zulu Natal (KZN).
- The crude line which runs from the coast to Secunda, via Vrede.
- The Durban-Secunda gas pipeline which stretches from Durban to Secunda, via Empangeni, Volksrust and Standerton.
- The refined products lines from Secunda to Witbank, via Kendal.
- The Pande-Sasolburg gas pipeline which stretches from the Temane and Pande gas fields near Moatize in Mozambique to Secunda.

The New Multi-Products Pipeline Project (NMPP) planned by SASOL will increase the operational capacity and flexibility of its existing pipeline network to Gauteng. Figure 4.20 indicates, a short stretch of the planned 525km multi-products fuel pipeline is set to traverse the far western extents of the Gert Sibande District. Whilst these pipelines are of strategic importance to South Africa's well-being, they do present physical development implication, which should be considered in respect of the spatial development of the Gert Sibande District.

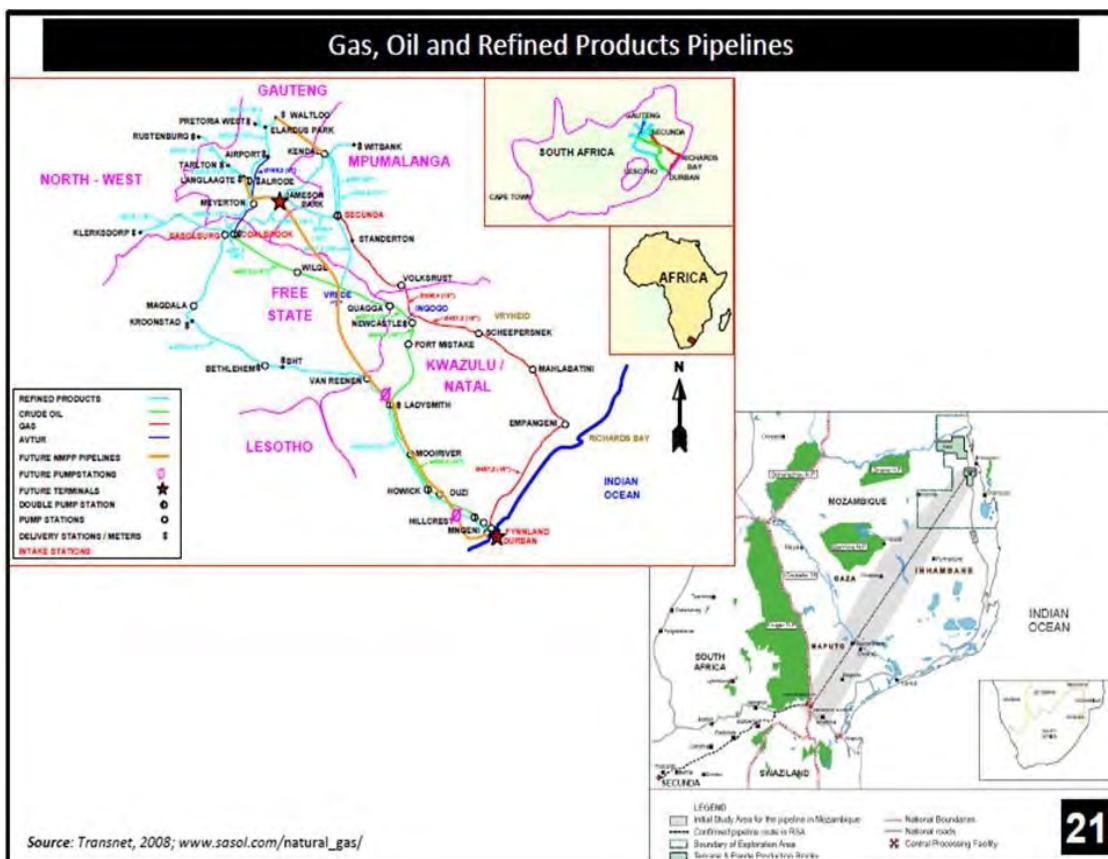


Figure 5-23: Pipeline locations in GSDM

5.4.2.2 Corridors

The Gert Sibande DM has identified its own important road corridors, which should be improved to underpin the local economy as detailed in the figure below:

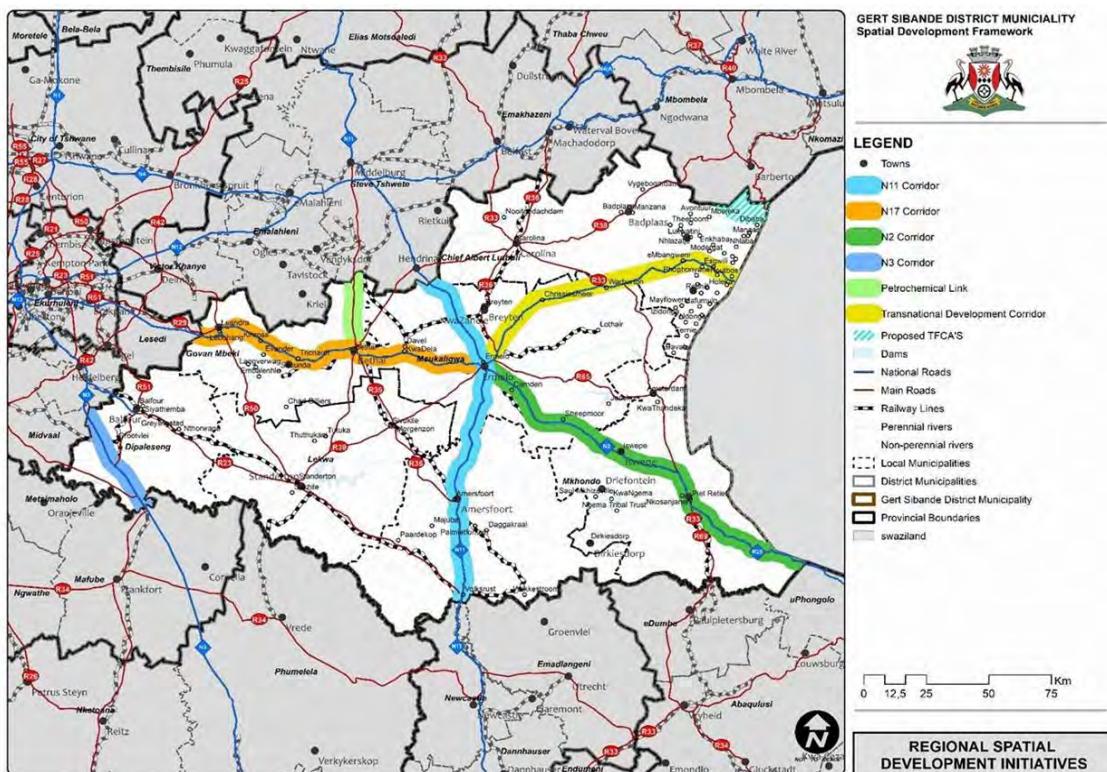


Figure 5-24: GSMD road corridors

The N11 intersects the N4 and N17/N2 at Middelburg and Ermelo, respectively, and links Limpopo with KwaZulu Natal. The corridor serves 21% of the provincial economy and provides accessibility to 16% of the total Mpumalanga population. The N11 corridor supported by railway lines needs to enhance its regional development function by integrating the N1, N4 and N2/N17 corridors into a functional system of regional development corridors and providing north south accessibility within the province, also supporting the coal and mineral rich areas of Limpopo. The N11 corridor also needs to provide impetus to the future of the Ermelo development node.

5.5 Nkangala DM Spatial Development Framework

5.5.1 Introduction

The final report on the Spatial Development Framework for the Nkangala District Municipality has been compiled as far ago as January 2015. Its policies and proposals have thus little reference for a PLTF that is compiled in 2024. Nevertheless it was studied in context for projects of note.

5.5.2 Projects of note

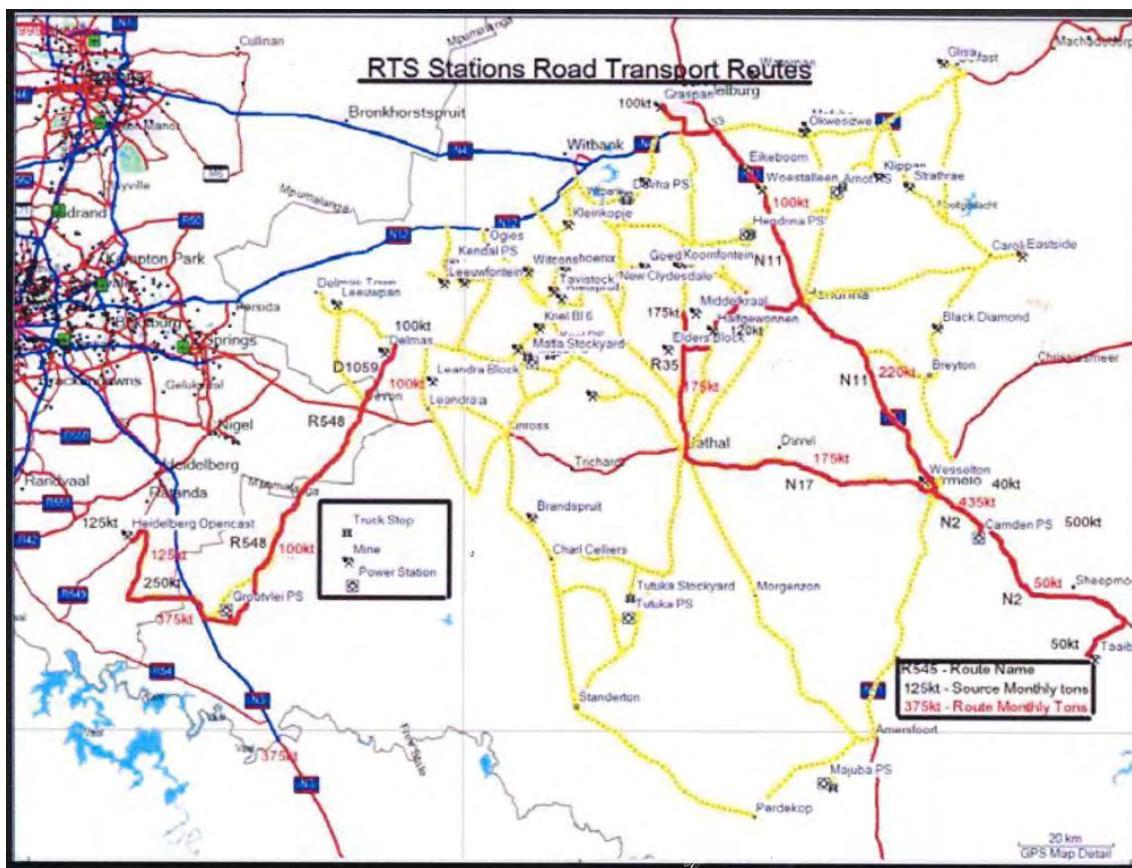


Figure 5-25: 2006 Eskom Coal Routes

By evaluating the conditions of these coal roads in 2024 it can easily ascertain whether the policy of enhanced maintenance for these routes were implemented or not.

5.6 Nkomazi SEZ

5.6.1 Introduction

The Nkomazi Special Economic Zone is of such importance for the Mpumalanga Provincial Land Transport Framework that it warrants a separate section in this chapter. The roots of the SEZ is vested firmly in transportation, freight and logistics and as such it is necessary for it to be supported by specific transport strategies in the PLTF.

The timelines and progress with the establishment of the SEZ are as follows:

- Nkomazi SEZ designation gazetted on the 22nd of March 2019.
- Nkomazi SEZ Entity was registered as a State-Owned Company in January 2021.
- A six-member Interim SEZ Board was appointed in March 2021.
- A PMU of three members was created immediately after designation.
- Institutional Arrangements have been put in place to assist in the implementation of the SEZ programme.
- A Nkomazi SEZ Five-Year Strategy is already in place.
- A fifty-year land lease agreement between the SEZ Entity and the Nkomazi municipality is already in place.
- Environmental Authorisation for the identified site is already in place.
- Site Layout Plan for township establishment is approved by the municipality.

- The Nkomazi SEZ is part of the municipal SDF and Komatiport Precinct Plan.

5.6.2 Location



Figure 5-26: Aerial view of the SEZ site.

The SEZ has a very advantageous location, namely in very near proximity to the Lebombo Border Crossing between South Africa and Mozambique. It will be situated on the N4 road corridor, as well as the primary rail link between the two countries. Access to the Maputo Port from South Africa, thus flows past the site and land for the use in the logistics value chain linked to the port can be developed for these purposes.



Figure 5-27: Location of the Nkomazi SEZ.

Because of its location next to the National Road N4 the SEZ can only have one access from a future upgraded systems interchange on the N4, as detailed below:



Figure 5-28: Access road to the SEZ

For this purpose, a servitude needs to be registered over private land as indicated and only once this has been done can the Township Register be opened, and the Nkomazi Township be proclaimed.

5.6.3 Development detail

The value of the SEZ in terms of the Mpumalanga Province's economy is to be measured in terms of the amounts invested, as well as the numbers of jobs created. At present there are 12 investors attracted in the areas of logistics, energy and agri-processing. The expected extent of these developments is detailed in the table below:

Table 5-4: Proposed developers in the Nkomazi SEZ_ Extract from Nkomazi SEZ

No:	Investor	Area of Investment	Est. Value of Investment (R)	Estimated No. of Jobs
1	DP World	Logistics	R363 m	1000
2	Biodegradable SA	Agro-processing	R650 m	10 000
3	Kase Group	Agro-processing	R130 m	60
4	Vutomi Energy	Green Energy	R8 b	500
5	InovaSure	Green Energy	R29 b	5000
6	Agrowex Industries	Agro-processing	R100 m	180
7	Nkomazi Energy	Green Energy	R220 m	50
8	Sangari South Africa	Green Energy	R280 m	600
9	African Eden Projects	Agro-processing	R1 b	15 000
10	Sanaha	Agro-processing	R8 b	10 000
11	AgriMarine Industries	Agro-processing	R250 m	1500
12	Feggy Essential Oils	Agro-processing	R100 m	120

Of special importance amongst the developments is the one from DP World in the field of logistics, where specifically road freight on the N4 will be re-allocated to rail transport to the Port of Maputo. The layout of the proposed development is given below:

This is extremely important for the Mpumalanga PLTF to take cognisance of this project as it firmly underscores a number of transport problems that are at the time of writing issues that need to be dealt with. These are:

- The congestion caused by trucks at the Lebombo Border Post due to inefficiencies in the rail transport corridor between the RSA and Mozambique.
- The stated policy of government that rail friendly freight that is transported by trucks shall be moved back to rail. (Rail Policy White Paper, May 2022).
- The fact that the output of many Limpopo and Mpumalanga mines are moved by truck to the Port of Maputo and that causes massive congestion at the port.
- The government of South Africa is in the process of allowing private rail operators to in the future to the government rail system after paying an access charge based on gross ton/ kilometres of use. Thus, in the future this may be a forerunner of many such facilities.

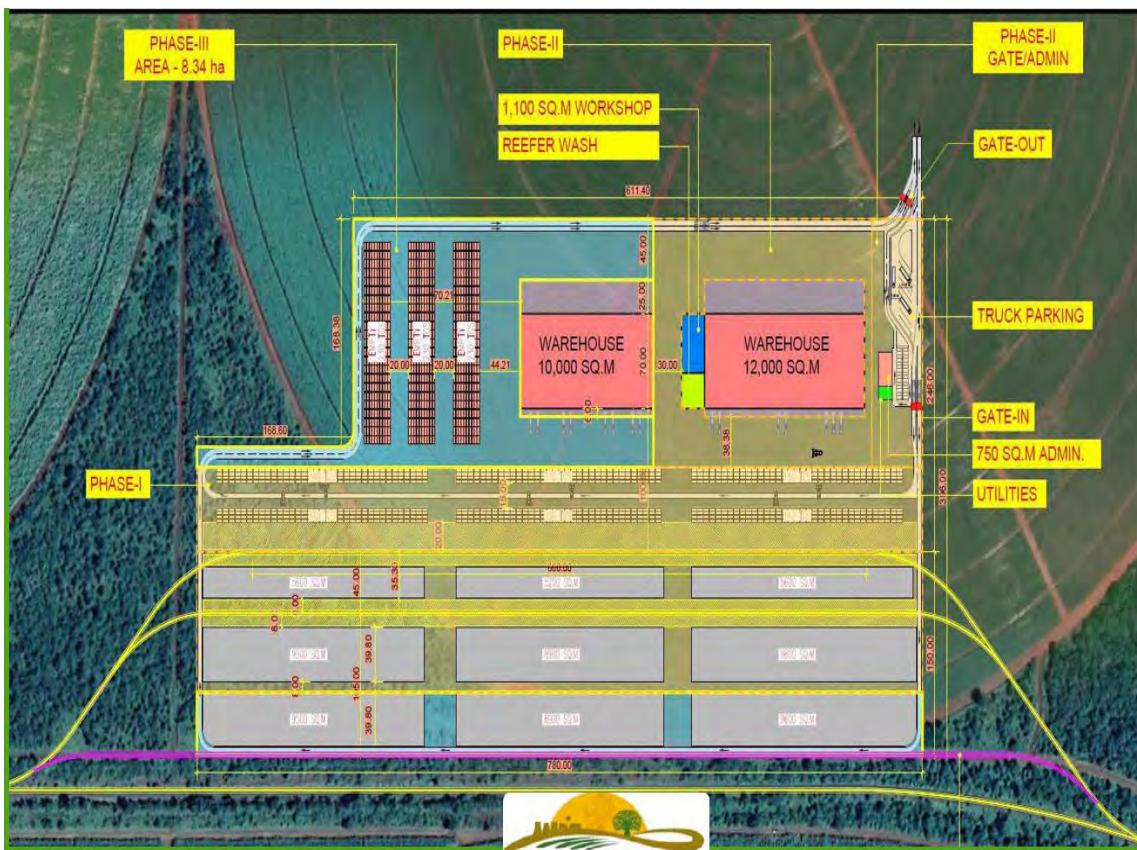


Figure 5-29: DP World development layout

5.7 Summary

In essence the Spatial Development Frameworks are the land-use side of Integrated Transport Planning. In the PLTF cognisance should thus be taken of all the different economic and land-use proposals in especially the provincial SDF. The transport implications and requirements of these proposals need to be defined and transport projects, implied by these proposals, need to be included in the transport implementation projects of the province.

All the policies and projects contained in the PLTF will be ascertained against the principle of whether it will enhance or work against the land-use and economic proposals defined in this chapter. This section covers objectives 1 and 2.

6 Chapter 6: Public Transport Strategy

6.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Public Transport Chapter are defined as follows:

- a) A description of strategic and high priority focus areas for public transport of provincial significance;
- b) A summary of initiatives planned or taken by the province to promote public transport over private transport;
- c) An identification of deficiencies in the public transport system and proposed or actual provincial measures to address them;
- d) A list of planned initiatives or initiatives undertaken by the province to improve the transportation of persons with disabilities and other special categories of passengers;
- e) A list of planned provincial initiatives or initiatives undertaken with regard to-
 - i. Modal integration strategies;
 - ii. The rationalisation of subsidised public transport;
 - iii. The establishment of Integrated Transport Networks;
 - iv. Engagement with municipalities where appropriate regarding the assignment of the operating licensing function to them;
 - v. The status of dispensing and dealing with operating licences in the province;
 - vi. Passenger rail services in the province;
 - vii. Public transport security;
 - viii. Corridor development strategies;
 - ix. The status of financial and economic support to public transport where the management of contracts concluded under the Transition Act has not yet been assigned to municipalities;
 - x. The use of adapted light delivery vehicles in public transport in the province, and
 - xi. A rural transport strategy.
- f) Details of agreements with other provinces regarding interprovincial transport, if any; and
- g) A summary of public transport strategies of provincial significance taken from the municipal Integrated Transport Plans, focusing mainly on strategies, actions and projects.

Transportation needs impact urban and rural areas, influencing resident's decisions about where to live, attend school, and work. South Africans still rely on public transport and walking as their primary mode of mobility to work, education, and other services, in the Mpumalanga Province, public transport remains the most cost-effective mode of transportation, despite the country's use of cars increasing dramatically in recent years. The Mpumalanga Vision 2030 National Development Plan's key recommendation is to have substantial investments in safe, reliable and affordable public transport and better coordination among the various modes.

The purpose of the public transport strategy chapter is to provide a summary of the transport deficiencies and challenges in the province. A scholar transport strategy is provided in this chapter since this is one of the high priority areas for public transport. Initiatives and strategies are listed to propose public transport initiatives and strategies in the province. A list of requirements to accommodate special needs transport, as well as the rural transport strategy are provided in the chapter. A list of planned provincial initiatives with regards to e) above is provided in the chapter.

The strategies outlined in this chapter are designed to align with the objectives of the national transportation strategies. The aim is to plan, develop, coordinate, promote, and implement transportation policies, laws, and strategies to establish an integrated, sustainable, reliable, and safe transportation system. This chapter seeks to identify the needs of transportation users, which are then evaluated to ensure that users have a variety of viable options and preferences for the transportation system.

This section covers the objectives 1,2, 3 as per chapter 2.

6.2 Challenges and Deficiencies

This section builds on the status quo established in Chapter 3 of the PLTF by identifying current difficulties in the public transport system in Mpumalanga.

6.2.1 Transport Deficiencies

The implementation of a seamless transportation network involves a variety of partners and levels of government. Taxis are the primary mode of public transportation in Mpumalanga, but they are not currently eligible for subsidies. Buses are the second most popular means of transportation, assisted by six public transport contracts: Buscor, PUTCO, Unitrans, Midbank, Tilly's, and Lebowa Transport. Additionally, the usage of buses and taxis makes daily commuting easier for students. The province is upgrading past feasibility studies to possibly revive passenger rail transit, particularly the Moloto Rail Development Corridor.

Public transportation in the province is usually offered through the following modes and services:

- **Subsidised services:**

- Rail

Passenger Rail of South Africa (PRASA), which oversees the concession process and manages operations on behalf of the national government, is currently in charge of rail planning at the national level. The Provincial Government have not been involved in the cancellation of some passenger services, which presents a barrier to rail planning.

- Bus

Private operators and a handful of government agencies operate on subsidised bus contracts. The Provincial Government manages these operations. Bus planning in the province is challenging, and concerns have previously been expressed about limited services and contracts that have been in place for a long time.

- **Non-subsidised services:**

- Minibus-Taxi

Taxis are regulated and supervised by operation licenses granted by public transport licensing boards (formerly known as provincial regulatory agencies) after consultation with local authorities. In this case, the connections have been effective mostly because the local authorities must supply infrastructure for the taxi mode.

- Long-distance Bus

The province has a high level of Intercity Coach Bus activity, which provides scheduled transportation services. Greyhound, Intercape, and Translux/City to City provide long-distance passenger services to and from Mpumalanga. Small bus operators/shuttle bus services are also running to and from the province.

According to the National Household Travel Survey 2022, in Mpumalanga, the most common reason for travel was to educational institutions (33.4%), followed by commuting workplaces (20.6%). Travelling to welfare offices was the least commonly cited reason for travel, accounting for only 0.2% of all trips.

6.2.2 Challenges and Deficiencies

The challenges and deficiencies that were recorded during the interviews and from data collected and reviewed indicated the following:

6.2.2.1 NATMAP 2050 Public Transport Challenges

In accordance with the NATMAP 2050 "Non-integrated transport planning across various modes that are not sufficiently customer focused and inefficient with poor levels of reliability predictability, comfort and safety. It does not reflect the world class aspiration of the NDP 2030. The fragmented nature of institutional governance over public transport is also not helpful."

Moreover, NATMAP 2050 identifies infrastructure and limited accessibility as a major issue with both rail and rural road infrastructure. It states that the infrastructure has been neglected and/or under-maintained for a couple of decades.

This is in part due to the transport sector competing for funding from the fiscus with other government / public sector services and national priorities. The poor infrastructure is also an important factor limiting accessibility in rural areas.

Similarly, there are issues regarding liveable communities, urban migration and modal integration that are affecting the accessibility of rural communities. Furthermore, the lack of implementation of regulations and existing policies, that result in funding not being spent need to be addressed. This compounds the fundamental issue that no transport system can function or be maintained, without adequate funding.

NATMAP 2050 identifies the following key issues regarding public transport:

- Lack of integration.
- Reliability and resilience issues.
- Implementation of appropriate passenger transport modes associated with expected demand.
- Competition between passenger transport modes resulting in friction between operators.
- On-corridor competition between passenger transport modes.
- Continued difficulties experienced with the proposed taxi recapitalization implementation, and the change in policy direction to include the taxi industry into BRT systems.
- The inefficient management and division of government subsidies for passenger transport, where many bus services are still being operated on month-to-month contracts.
- Lack of land use and transport integration influence the effective implementation of mass moving passenger transport.
- Disjointed and inadequate provision of learner transport.
- The perpetuated apartheid style placement of new low-cost housing developments on the periphery of cities/towns add to urban sprawl resulting in long travel time and inefficient use of passenger transport.
- Very low densities in rural areas render the provision of scheduled passenger transport unaffordable.
- Lack of safety and operational compliance standards for the general passenger transport.
- The contrast in quality, safety and convenience between Bus Rapid Transit facilities and the facilities of traditional passenger transport modes.
- Lack of maintenance of current passenger transport facilities due to under investment.
- Lack of integrated ticketing, information systems.
- Lack of universally accessible passenger transport facilities and vehicles.

6.2.2.2 NHTS Mpumalanga 2022

The 2022 results of the NHTS for Mpumalanga indicated the following:

- Walking all the way was the primary method used by scholars to reach their school (72,7%).
- This pattern is also true for disabled scholars (81,1%).
- For educational institutions:
 - walked all the way (69,4%)
 - 68,2% walked as it was close enough.
 - 18,9% indicated it was too expensive to use public transport.
 - 14% Travelled by taxi.
 - Travelling by taxi was the most expensive mode.
- Workers mostly walked all the way.
 - Nkangala having the highest percentage that walked all the way.
 - The major reason for walking all the way due to the destination being close enough, their preference or because PT is too expensive.
- Business trips:
 - +-45% of the business trips were from Nkangala.
 - 44,9% of the business trips were from private car usage.
 - 32,5% of business trips were from taxis.
- Day Trips
 - Reasons for taking day trips.
 - visiting friends/family/ancestral home 46,3%
 - Shopping 11,6%
 - leisure/holiday at 11,1%.
 - funeral events 8,5%
 - look for work 7,2%.
- Overnight Trips

- Modal used for overnight trips.
 - 49% of trips done through Taxis
 - car/bakkie/truck driver at 18,6%
 - 9,8% used buses.
- Household travel patterns
 - More than half of Mpumalanga households walked to religious institutions (58,6%).
 - 56,4% walked to food or grocery shops.
 - 40,1% walked to a medical service facility.
 - Taxis were the second most used mode of travel to access these facilities and services.
 - More than six in ten of households used a taxi to go to Home Affairs offices (64,6%). while 64,4% travelled by taxi to access financial services/banks and 62,7% travelled by taxi to visit other shops.
 - Taxis were also the main mode of travel to the police station (53,3%) and accessing municipal offices (58,2%).
 - About ten per cent (10,2%) of households indicated that they had no transport-related problems.
 - 11,3% indicated the poor condition of roads.
 - 12,2% of households identified unavailability of buses at specific times as their main transport-related problem.
 - Provincially, almost ten per cent (9,9%) of households indicated that taxis were too expensive.
 - Four per cent (4,0%) of households considered reckless driving by taxi drivers as one of their transport related problems.
- Dissatisfaction with taxi, and bus services
 - dissatisfied with the facilities at the taxi rank, e.g. shelters 33,9%.
 - dissatisfied with the waiting time for taxi 30,1%.
 - dissatisfied with the taxi fare 28,7%.
 - dissatisfied with the security on the walk to/from the taxi rank 26,8%.
 - dissatisfied with the facilities at the bus stop, e.g. toilets, offices (47,6%) and the level of crowding in the bus (46,7%).
 - Other notable issues:
 - The distance between the taxi rank/route and home.
 - The distance between the bus stop and home.
 - The roadworthiness of taxis was of most concern in Nkangala.
 - Security at the bus stop was a concern.
 - Availability of bus information was of concern in Nkangala and Gert Sibande DM's.
- Factors influencing the household's choice of transport.
 - Almost all three district municipalities mentioned travel cost as their biggest factor influencing their choice of travel mode, followed by travel time.
- Ownership of bicycles and/or access to cars.
 - About forty-thousand households owned between one and three bicycles.

From the above analysis, major issues around safety, security cost of travel and the condition of the facilities for both bus and taxi have a major impact on the usage of these modes. Furthermore, there is a major portion of the province that utilise NMT as the preferred mode. Integration of the NMT and PT modes is deemed significant.

6.2.2.3 General Challenges

General changes are defined as such:

- Technical expertise is lacking in managing the Local Integrated Transport Planning process. This indicates that there is an urgent need to develop transport planning technical skills at the local and district municipal levels.
- Some of the communities have limited mobility and insufficient access to major economic activities.
- Passenger Rail of South Africa (PRASA), which oversees the concession process and manages operations on behalf of the national government, is currently in charge of rail planning at the national level. The Provincial Government has not been involved in the cancellation of some passenger services, which presents a barrier to rail planning in the province.
- Private operators and a handful of government agencies operate on subsidised bus contracts. The Provincial Government manages these operations. Bus planning in the province is challenging, and concerns have previously been expressed about limited services and contracts that have been in place for a long time.

- The Republic of South Africa is linked to neighbouring countries through national and provincial roadways, with the infrastructure being damaged due to excessive vehicle overloading. Strengthening traffic control capacities is crucial.
- The consolidation of existing dispersed routes into focused corridors that connect major origin and destination nodes to accommodate users.
- The lower-class communities necessitate basic public transport services, including access to the nearest appropriate employment centres, health and education facilities, shopping, and other social services.

6.2.2.4 Contracted Services Challenges

The contracted bus services that operate in Mpumalanga are as follows.

Bus Companies
Buscor
Great North Transport
Megabus
Putco
Thembalethu Bus Services
Tilly's Bus Services

These bus companies have indicated the following issues with regards to operating in Mpumalanga:

- Service delivery strikes affects the operations.
- Bad road condition along the routes operated on.
- Trucks are utilising the bus stops as the truck stops.
- Vandalization of bus stops infrastructure within Ehlanzeni.
- Need for universal accessibility at the bus stops.
- Conflict with the Taxi industry.
- Safety of passengers on and getting to the bus stops
- Funding issues.
- Lack of bus shelters at bus stops

6.2.2.5 Non-contracted Services

In meetings held with the taxi industry SANTACO, as well as with NTA, the following issues were identified.

SANTACO Challenges and Concerns

Rank facilities challenges:

- There's a lack of multimodal ranking facilities within the province.
- The ranking facilities within the developer's area (e.g. Malls) do not meet the rank facility standard.
- These areas require development of the proper ranking facilities at the informal rank operational space.
- There is a lack of ablution blocks at the existing rank facilities.
- There's a lack of hawker's zones at the ranking facilities.
- Majority of rank facilities have problem with shelters or the lack of shelters.
- There is a shortage of rank offices and pay point stations at the ranks that include long distance operations.
- There are safety issues for both commuter and operators at the ranks.
- Lack a security fencing at rank facilities.

Operational Challenges:

- There is a lack of loading zone/embayment along the public transport routes.
- The road conditions are bad along the most of the public transport routes within the province.
- Impounding of vehicles (MBT), while bad road condition is damaging vehicles.
- There is a lack of shelter at their loading bays.
- Speed humps implemented along public transport routes not done according to size specification and are damaging MBT.

General Challenges within the taxi industry:

- Taxi industry is not subsidised.
- The illegal operations (Avanza's) invading the taxi's operational space (Local & Long Distance)
- Vehicles that are not regulated are operating as the Scholar transport within the province.
- Issuing of illegal OL for passenger vehicles for both members & non-members of the associations.
- 60% rate of vehicle repossession due to effect of illegal operations.
- Duplication of vehicle registrations operating as public transport.
- Low-rate p/km on scholar transport claim.

Potential area of Improvements

- Development of ranking facilities in different regions in Mpumalanga.
- Gap between Taxi industry and Municipalities during the development of new residential area, (Lack of engagement for public transport plan)
- Subsidising the Taxi industry.
- Decline on the supply to taxi operations due to job losses.

NTA Challenges and concerns

Challenges identified by NTA

- Issues of rejecting application of new OL in Mpumalanga.
- The issue of conducting the surveys at the taxi ranks without consulting the associations before the survey.
- There is lack of development of the ranks by the Local and District Municipalities in Mpumalanga. Only developers are creating ranking facilities.
- Lack of infrastructure development in Nkangala.
- The taxi industry is not getting subsidy from the government.
- The long-distance permit that are strictly for the specific routes as described by the permit. They require permits that does not specify routes to drive via from start point to destination.
- Illegal operation with their operational area in different regions in Mpumalanga.
- Issues of 7 seaters getting permits, while it was stopped by the Government before.
- Scholar transport permits are limited and are given to same companies.
- Companies from outside Mpumalanga are getting scholar transport permits.
- Vehicles older than 15 years do not get OL.

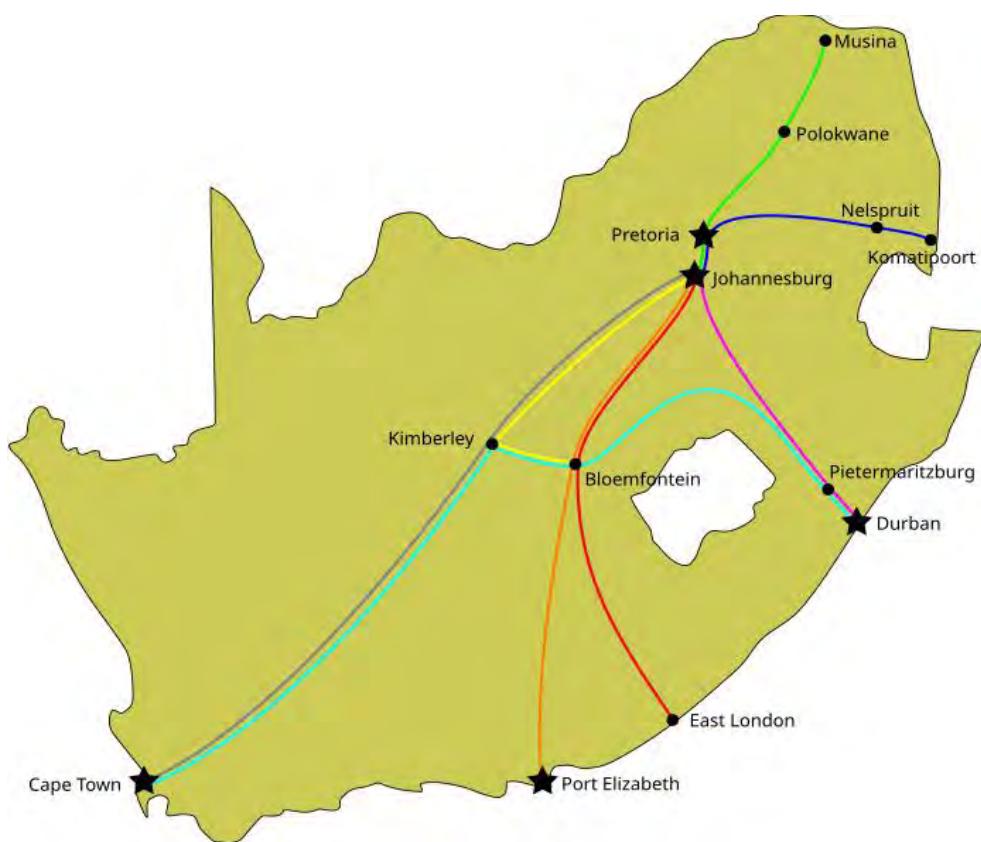
Possible area of improvements.

- Taxi industry also need subsidy.
- Associations can also be consulted when new buses are introduced to their operational space.
- Taxi industry subsidy can be conducted via the associations.

6.2.2.6 PRASA Challenges

The only passenger service operational in Mpumalanga is between Johannesburg, Pretoria, Mbombela and Kamatipoort for the Shosholoza Meyl PRASA operations. However, in an article produced by Sandiso Phaliso for News 24 on the 3 October 2024, that PRASA has suspended three of four Shosholoza Meyl train routes. The only remaining operational route is the Johannesburg to East London route. The reasons cited in the article from PRASA spokesperson Andiswa Makanda are:

- Old unreliable Trains.
- Trains consistently breaking down.
- Cable theft and vandalism on routes.



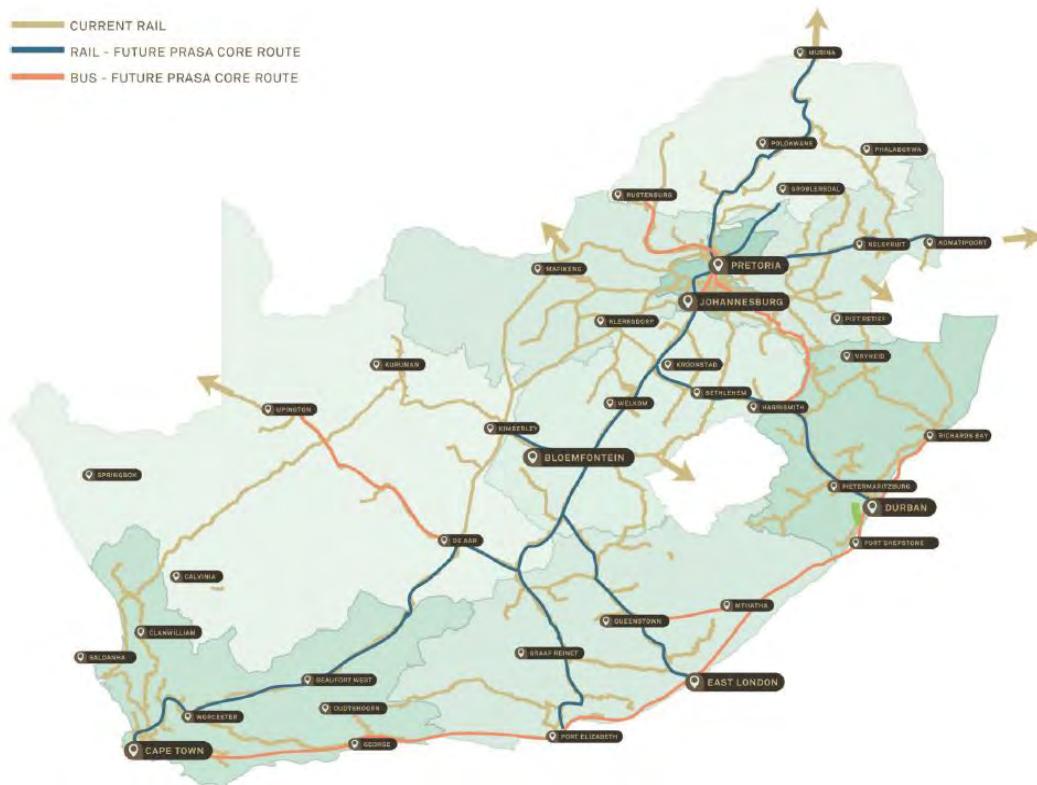


FIGURE 8-13: CURRENT PRASA LONG DISTANCE SERVICES (Source: PRASA)

6.3 Strategic and High Public Transport Focus Areas

The development of an integrated multi-modal transport system will require involvement from all levels of government. The province should concentrate on the items listed below to improve the public transport system:

- It was stated in almost all areas of challenges was the cost of public transport. Addressing the high public transportation costs is critical since it affects multiple business sectors. Improving connectivity within the province, particularly in remote areas, will lower travel expenses.
- The majority of paved road network in Mpumalanga is a poor to fair condition (60%). This has a detrimental effect on the long distance and rural public transport. The priority for upgrading and rehabilitation needs to be formalised and implemented.
- Municipalities must continue to prioritise the classification of their road networks and backlogs in terms of re-gravelling and tarring. This work requires participation from all municipalities because it cannot be administered simply by the government of the province.
- Safety remains the most important condition to be met. In a multimodal transportation system, safety should be standardised so that it is evident throughout the entire travelling chain by visible policing on Public Transport nodes, to develop awareness to service providers. This extends to the NMT trips to local stops and boarding areas. Initiative can include increased lighting, separated walkways, improved and visible law enforcement, appropriate NMT infrastructure, security at taxi and bus ranks.
- The public transport infrastructure should be improved wherever possible to provide appealing facilities for users (shelters, waiting facilities, hawker stalls, e.g.). This was stated as a major dissatisfaction on both taxi and bus routes.
- A smooth transportation system may be established throughout the province by concentrating on modal integration through the construction of bus modal facilities as crucial projects.
- Public transport corridors in rural areas should be developed to provide easy access and connections to business hubs and educational institutions.

- Subsidized buses primarily cater to peak-hour commuters and provide limited off-peak services for students, learners, and the elderly. Affordable transportation for learners is essential, and scheduled off-peak services should be introduced to accommodate commuters during the off peak.
- Establishing non-motorized public transportation infrastructure (footpaths, crossings, and bridges) alongside class 3-5 public transport routes in Mpumalanga for citizens who walk to religious institutions, stores, and medical services e.g., should be implemented.
- There is a major need for scholar transport. As such an investigation into scholar transport demands and needs should be carried out per local municipality. This should be a multimodal approach investigation to access from NMT to vehicle transport requirements.
- Improved accessibility within the province due to remoteness of certain regions will result in reduced travel costs.
- By focusing on modal integration through the development of bus modal facilities as critical projects, a seamless transport system can be achieved within the province.
- The public transport infrastructure should be identified within the Current Public Transport Records, (CPTRs) and upgraded where possible, to provide attractive facilities for users.
- All municipalities should continuously highlight the classification of their road networks and backlogs in terms of re-gravelling and tarring, as this is not a task that can be managed by the provincial government without the cooperation of each municipality. The municipalities are also expected to develop Roads Master Plans to address issues of tarring as well as operations and maintenance of roads in the next IDP review.
- The current bus subsidy budget makes little provision for learner transport. Subsidised buses serve mainly peak hour commuters and offer limited off-peak services to learners, students and the elderly. Where there is no learner transport, these learners go to school on foot or by public transport, private transport, private school buses or privately arranged special transport. The objective should be to make transport for learners affordable, subsidise it to a certain extent and to limit the distance learners have to walk, to and from school to less than 5 kilometres. Another key focus area would be to focus on non-motorised transport facility improvements for scholars.
- To address the challenges, emphasis should be placed on resources.

6.4 Initiatives to Promote Public Transport over Private Transport

Reliability and frequency are important quality attributes for public transport commuters, but safety, affordability, comfort, convenience, and attractiveness are crucial. As a result, public transport should be appealing to commuters for them to willingly switch from the comfort of their vehicles.

The following strategies to improve public transport within the province can be considered:

- Promote the taxi recapitalisation scheme launched by the National Government.
- Passenger safety and security, whether experienced or perceived, have a detrimental impact on public transport usage. Passengers who do not feel comfortable are less likely to use the system. Ensuring passenger safety on public transportation is important by reminding commuters to always remain aware.
- Investing significantly in public transportation that is both affordable and reliable, as well as of high quality.
- Provision of sufficient facilities, infrastructure, and services for public transportation.
- Promoting public transportation services generally, such as by disseminating details regarding schedules, rates, and routes.
- All design and construction projects must accommodate the disabled, pedestrians, bicycles, and new taxi vehicles.
- Subsidising Public Transport fares to make it more feasible.
- Allow passengers with special needs to get the right concessionary fares.
- Providing multimodal public transportation options in key areas of business.
- Provide loading and off-loading facilities for public transportation at strategic locations in both rural and urban settings.
- Supporting the Integrated Public Transport Network planning.
- Connect NMT to public transport stops to allow for seamless transition between NMT and PT.

6.5 Scholar Transport

6.5.1 Previous Studies

In 2017 a Scholar Transport study was conducted for Mpumalanga. The aim of the study was to evaluate the benefits of the Buy, Operate & Transfer (BOT) Model that was developed within the scholar transport system in the Gert Sibande and Nkangala regions of Mpumalanga.

The key objectives were highlighted below:



Figure 6-1: Scholar Transport Study Objectives 2017

6.5.1.1 Principles and Departmental Needs 2017

In accordance with 2017 Scholar Transport Study done for Mpumalanga Province, the policy statement outlined key principles of the scholar transport policy framework, eligibility for scholar transport services, as well as the process of identifying scholar transport beneficiaries.

- The standard of service of scholar transport services must provide value for money spent by the Department.
- Scholar transport services must reasonably address user needs, including the needs of learners with disabilities.
- The scholar transport services must run according to the agreed schedule.
- Licensed public transport vehicles used must be roadworthy and safe. The security of the learners in the vehicles must be of the highest standard.
- The system and service must be reliable, effective and efficient. It must also meet the required service and safety standards.

From the principles above, the Mpumalanga DPWRT indicated the following need:

01	The Department of Public Works, Roads and Transport is committed to streamlining the provision of scholar transport in Mpumalanga and assisting the Department of Education in the promotion of access to education through an effective and efficient
02	In support of the Constitutional right to basic education, the Department of Public Works, Roads and Transport strives to provide scholar transport services to learners staying five or more
03	The context of this research was the National Scholar Transport Policy and the ever increasing costs that each province has to pay to keep the service running. In as much as there is an opportunity to deliver an innovative solution to government, it is important for all concerned to have a scientific understanding of the scholar

The findings of the analysis indicated the following:

- The new bus model performed much better than the old bus model on efficiency, convenience, reliability and safety.
- It was recommended that the bus system be rolled out in the Gert Sibande Region in Mpumalanga.
- The roll-out of the new bus model to other schools should be implemented in phases.
- The roll-out of the new bus model to 50% of the schools should be followed by another review of the performance of the two bus models within 3 - 5 years to inform any future decision regarding the proportion of the schools that will use the new bus model.
- The operators of the old bus model should be encouraged to make an effort to improve their performance in order to ensure that they continue to enable the learners to easily and conveniently access the schools.

Table 6-1: Results of the findings of the Scholar Transport Study of 2017

Efficiency and Reliability (Learners' views)			
Monitoring Criteria	New Bus Model	Old Bus Model	Conclusion on which bus model performed better
Familiar with pick-up and drop off times	83%	73%	The new bus model performed better
Familiar with pick-up and drop off points	96%	81%	The new bus model performed better
The bus service is very efficient	70%	71%	The old bus model performed better
Takes less than 10 minutes to get to pick-up points in the morning	49%	69%	The old bus model performed better
Waits for about 10 minutes for bus at the pick-up points in the morning	74%	57%	The new bus model performed better
Takes up to 20 minutes from pick-up points to school in the morning	46%	27%	The new bus model performed better
Buses always arrives on time at pick-up points in the morning	57%	27%	The new bus model performed better
Buses arrives at school before classes start	76%	38%	The new bus model performed better
Buses always arrives on time at pick-up points in the afternoon	60%	56%	The new bus model performed better
Buses always use the same route in the morning	86%	89%	The old bus model performed better

Safety (Learners' views)			
Monitoring Criteria	New Bus Model	Old Bus Model	Conclusion on which bus model performed better
Learners are dropped off at designated points close to the school	78%	61%	The new bus model performed better
Buses have enough seats for learners	50%	48%	The new bus model performed better
Feel safe when walking alone to the pick-up points in the morning	40%	52%	The old bus model performed better
Feel safe while waiting at the pick-up points in the morning	81%	77%	The new bus model performed better
Feel safe when riding the bus to school in the morning	76%	69%	The new bus model performed better
Buses are still in a good condition	86%	60%	The new bus model performed better
The speed of the bus is comfortable	63%	57%	The new bus model performed better

Reliability, Efficiency and Safety (Principals, Educators and Parents' views)			
Monitoring Criteria	New Bus Model	Old Bus Model	Conclusion on which bus model performed better
The bus service is very reliable	70%	71%	The old bus model performed better
The bus service is very efficient	76%	75%	The new bus model performed better
Buses have enough seats for learners	60%	58%	The new bus model performed better
Buses are still in a good condition	90%	38%	The new bus model performed better
The speed of the bus is comfortable	90%	87%	The new bus model performed better
The bus service is very reliable	70%	71%	The old bus model performed better

Although the study was conducted to determine the efficiencies of the innovative system, it did not identify the demand and or need for transport in Mpumalanga.

6.5.2 Needs Analysis

The need for Scholar transport was mentioned in the strategic and high public transport focus:

There is a major need for scholar transport. As such an investigation into scholar transport demands and needs should be carried out per local municipality. This should be a multimodal approach investigation to access from NMT to Vehicle transport requirements.

The NTHS 2022 indicated that 72.7% of scholars walk all the way to school, while 27.3% of scholars use a vehicle mode in their trip. Of 72.7% only 68% indicated that the school was close enough to walk to. This indicates that over 30% of scholars surveyed are walking to school due to reasons others than choice. However, education attendance for persons aged 5 – 24 years 73.4% attend the educational institution with 26.65 not attending. This

indicates that 26.6% of scholars are not attending school. Hence the 72.7% that walk all the way to school only accounts for those who attend school. As a result, of the total persons aged in the school going age, 53.4% walk all the way to school. This indicates that scholars walking to school as a choice due to the school's location as a total for persons aged for school only amounts to 36.4%. Based on the school going age that attend school, the statistics are estimated as follows:

- 73.4% Attend a form of education:
 - 36.4% walk all the walk.
 - 17.1% walk as a result of PT being too expensive, as well as other reasons.
 - 19.9% use PT or private transport.
- 26.6% don't attend a form of education.

The above highlights the significant impact that transport and affordable transport has on the educational system. Section 3 indicated that all three districts have a lack of scholar transport and or issues with scholar transport safety. Some of the major issues is access to transport, affordability and safety for scholars. Moreover, the right to education should not be limited to transport availability. Transport is a means to access education and as such is a must when considering the access to education for all south Africa's children. The DM's have all indicated the need for a scholar transport investigation and implementation plan.

6.5.2.1 Scholar Transport Strategy

The proposed strategy is recommended in a step process to conduct a meaningful Scholar transport study and implementation process:

- Step 1: Define the project and required scope:
 - A provincial Scholar Transport Implementation Plan
 - Demand Analysis for Scholar Transport in Mpumalanga
 - Identify all PT routes and coverage in relation to schools.
 - Define the legislations and national requirements for walking distance for urban and rural learners.
 - Identify existing scholar transport routes and coverage.
 - Identify gap between existing coverage and existing schools.
 - Identify proposed new schools and gaps between existing PT routes.
 - Through consultations with the schools identify OD pairs for the schools.
 - Identify the walking distance for rural scholars and pick up points.
 - Identify the gaps between the rural transport strategy and the existing PT service for scholars in the rural communities.
 - Identify demand for scholar transport.
 - Through the PT transport KPI's regarding affordability determine current affordability of the scholar transport.
 - Operational Plan Development
 - Updated the 2017 Scholar Transport Study regarding finical viability of the proposed model.
 - Develop an operational plan for that address the gaps in the public transport networks and formalises the existing public transport scholar transport into an integrated transport network.
 - Identify the number of trips and fleet.
 - Identify the OL that would need to be amended and or increased to implement the operational plan.
 - Infrastructure requirements:
 - Stops and shelters
 - Depots
 - Rank improvements
 - Safety requirements and road crossings
 - NMT integration
 - Universal accessibility (Fleet and Infrastructure)
 - Identify the VOC required, and operational structure required.
 - Feasibility Analysis
 - Financial model development
 - Economic study of the operations

- Risk analysis
- Contracting type and requirements
- Industry transition
- Subsidy Requirements
- Business plan and treasury application
- Implementation Plan
 - Industry Transition
 - Infrastructure Plan
 - Operational rollout plan
- Government sectors involved:
 - Department of Public Works Roads and Transport Mpumalanga
 - Provincial Department of Education
 - District Municipalities
 - Local Municipalities
 - Provincial and National Treasury
- Step 2: Secure the budget for the defined scope.
- Step 3: Develop the RFQ for the project.
- Step 4: Appoint the service provider for the study and implantation plan.
- Step 5: Negotiations with industry.
- Step 6: Appoint a contractor for the infrastructure implementation.
- Step 6: Implementation and rollout.
- Step 7: Maintenance and Monitoring of the operations and infrastructure.

The proposed project should be conducted at a provincial level and stakeholders should be identified through all sectors. This strategy should identify and address the major concerns around scholar transport in Mpumalanga. With regards to NMT integration, refer to the section 7 and with regards to scholar safety, refer to section 11 of this report.

6.6 Special Needs Public Transport

Mpumalanga has a large number of disabled workers and scholars who rely on public transportation to commute, therefore accessibility to public transportation for those with impairments and the elderly is crucial. The Public Transport Strategy of 2007 anticipates a South Africa with complete accessibility for people with disabilities. The legacy will ensure that the core Network (including road and rail corridors, as well as associated precincts and stations) is completely accessible to wheelchair users and others with special needs, such as the blind and deaf. The National Disability Policy (2010) promotes the successful integration of people with disabilities into mainstream society. Planners and decision-makers must develop accessibility rules and standards, as well as identify barriers to accessibility.

The province will need to implement the following to meet the needs of special categories of passengers:

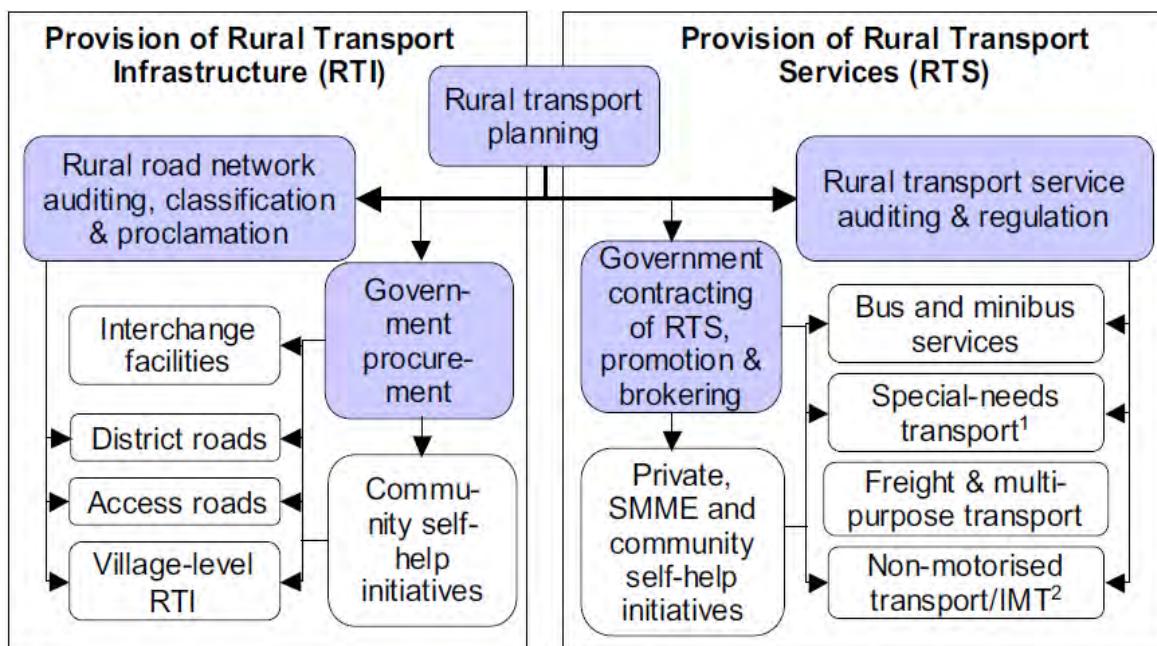
- Accessible public transportation vehicles must be clearly labelled.
- Educate drivers to ensure they can assist special categories of passengers.
- Encourage the creation of public accessible transportation that is universally accessible in order to provide subsidised transportation to individuals with disabilities.
- Support the provision of subsidised transport to persons living with disabilities through the establishment of universal.
- The municipality should invest in upgrading existing infrastructure (dropped curbs at intersections/crossings/public transport stops, accessible sidewalks, tactile paving, traffic signalling).
- NMT facilities must follow relevant rules, such as the National Department of Transport's 2014 NMT Facilities Guideline.

6.7 Rural Transport Strategy

The National Department have undertaken the review of the Rural Transport Strategy. Rural communities within South Africa have been under serviced and interventions have been unsuccessful and not sustainable in the past. It is essential that the implementation of the Rural Transport Strategy be implemented in every province. The current challenges that affect rural transport are:

- Poor access to public transport.
- Fragmented development patterns hinder consistent and integrated rural transportation system development.
- Low population densities of some areas.
- The implementation of rural transport strategies is hampered by a lack of prioritised funding and technical or managerial capacity to oversee the roll out of projects at district level.
- Lack of "off-road infrastructure", such as paths and tracks for non-motorized transport modes.
- Inadequate institutional capacity to implement rural transport planning.
- Inconsistent planning, monitoring and execution.
- Funding constraints.

The Rural Transport Strategy highlights the strategic implementation of quality transport infrastructures and services to rural communities. It highlights a set of interventions in order to improve accessibility and mobility, institutional coordination and coordination of funding systems. The Rural Transport Strategy's implementation framework serves as a guideline for municipalities to accelerate transport development in rural areas. The total extent of rural transport is depicted in the following diagram:

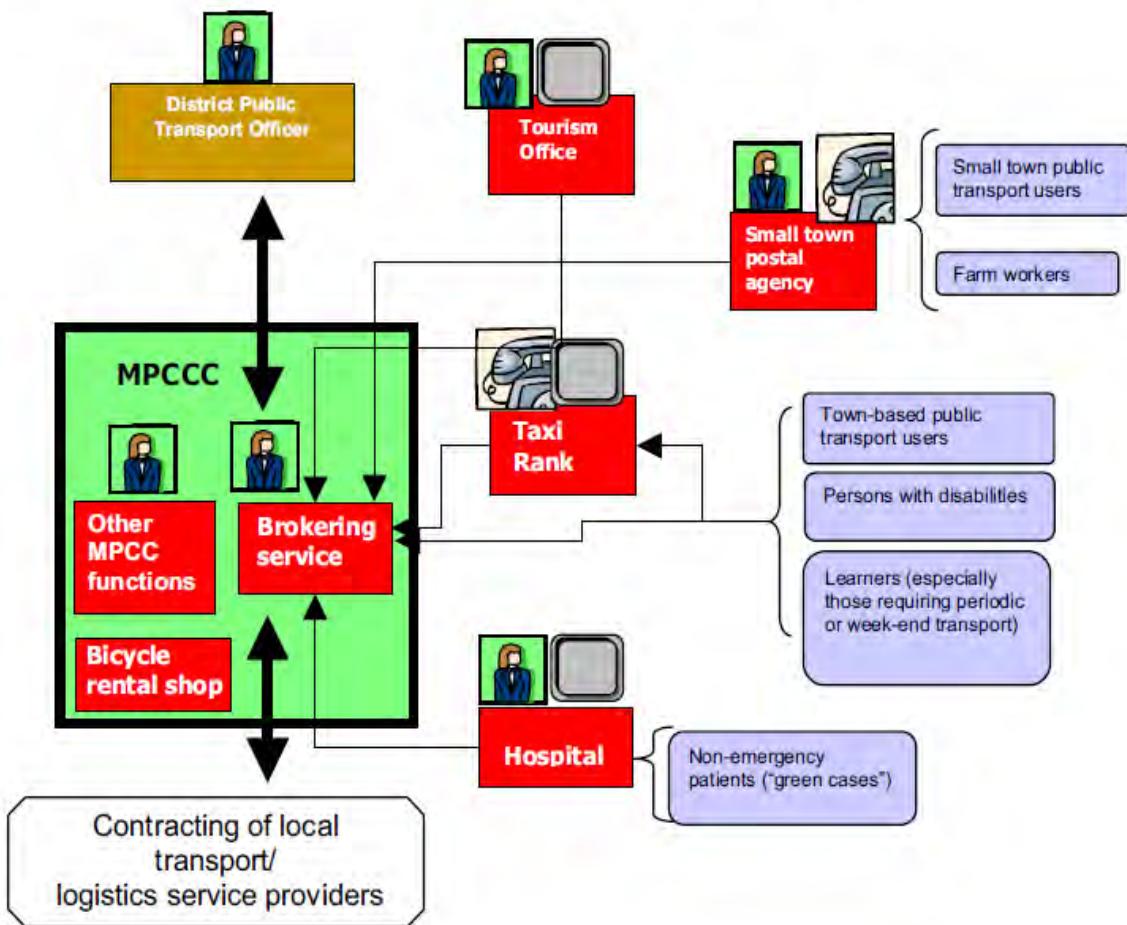


The total extent of Rural Transport thus includes the following actions:

- Developing and maintaining a rural road network;
- Providing and maintaining interchange and ranking infrastructure;
- Providing basic mobility in the form of bus or minibus taxi services;
- Providing transport for special needs users (including scholars);
- Freight transport; and
- Non-motorised transport.

Another concept being addressed in the South African Rural Transport Strategy is the aspect of providing transport mobility as specific regional hubs through using technology to provide special brokerage of services, as is detailed diagrammatically below:

Mobility Brokering Service/ Network



In accordance with the National Rural Transport Strategy, the following guiding principles were developed.

- Inclusiveness with respect to all critical rural access needs, which includes economic and social needs of rural communities and other disadvantaged groups and universal access planning for public transport;
- Alignment and linkage with integrated development initiatives, focusing on the National Development Plan (NDP) and Integrated Development Plan (IDP);
- Developmental effectiveness, referring to the direct impact of rural roads and public transport on job creation, enterprise development, provision of general capacity building for the social development of communities, access to socio-economic participation, mainstreaming of rural economies into broader provincial gross domestic product (GDP) and improved rural livelihoods;
- Sustainability, with regard to the transport system itself and well-researched investment decisions on local, provincial and national economies. Sustainability also requires that attention be given to the impact of the rural transport system on the wider social, economic and biophysical environment; and
- Action orientation and cohesion relates to the need to move beyond strategizing, planning and regulatory frameworks to implement a more balanced and integrated delivery system.

6.7.1 Rural Transport Strategy

Based on the above and guiding principles, to Implement the rural transport strategy by:

- Prioritised funding and technical and managerial support from the DPWRT to oversee the roll out of projects at district level.
- Develop a strategic “off-road infrastructure” network implementation plan with dedicated and prioritised funding to enable paths and tracks for non-motorized transport modes to provide better access to mainstream infrastructure (e.g. Shova Kalula, cycle schemes, dial a ride with local community partnership). The strategy must define a hierarchy of appropriate modes associated with off-road infrastructure. Work needs to be done to consider what mode of transport or means is best suited to provide access for a variety of reasons, e.g. scholar transport, rural communities without access to the formal road network etc.
- Introduce a more comprehensive Non-Motorised Transport and Intermediate Means of Transport programme that incorporates cycling, animal drawn carts, NMT infrastructure, safety issues and the promotion of these initiatives.
- Beneficiation (industrialisation) around the primary sector in rural areas.
- An action plan must be developed defining the most appropriate rural locations to be targeted, the marketing strategy to support beneficiation, the stakeholders that need to be engaged, the markets that will be accessed, likely consumers, the incentives required to attract funding and investment and the long term roll out of beneficiation.

6.7.2 Rural Transport Implementation Framework

The Rural Transport Strategy has compiled a Rural Transport Implementation Framework and has five pillars as indicated in Figure below.

- Alignment with the National Development Plan (NDP), Comprehensive Rural Development Programme (CRDP) and Integrated Development Plan (IDP) framework.
- Alignment of rural transport interventions with broader government priorities.
- Linkage with local economic development, poverty alleviation and other social service delivery programmes.
- High-leverage focus projects and promotion of IPTN plans:
 - Provision of rural transport infrastructure;
 - Provision of rural transport services; and
 - Provision of non-motorised transport (NMT) and intermediate means of transport (IMT).
- Regulations and safety
- Capacity building and monitoring
- Funding

This is translated into the flow diagram below.

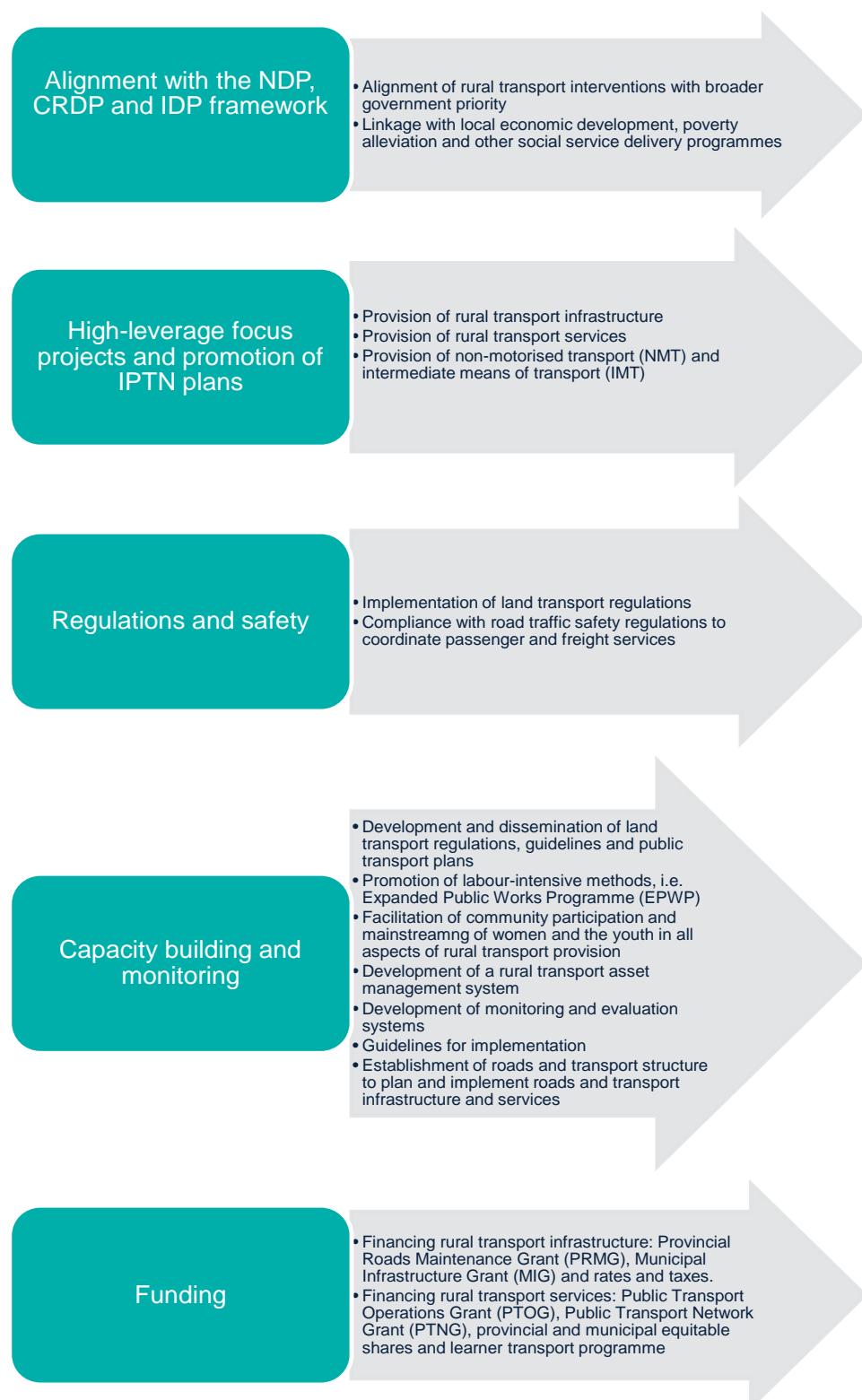


Figure 6-2: Overview of the Rural Transport Implementation Framework

A sustainable Mpumalanga rural transport implementation plan should be developed to address the items above. This should be developed by the provincial authorities.

6.8 Modal Integration

Modal integration is the incorporation of some or all of the various modes of public transportation (primarily minibus-taxi, bus, and train) into the public transportation system. These modes should be connected in such a way that they can function as a smoothly coordinated public transportation system while offering an effective, efficient, and affordable service to the user.

There are currently two main modes of public transport in the Mpumalanga province, namely buses and taxis that are operational. The following are proposed in terms of modal integration:

- As part of the Integrated Public Transport Network, establish public transportation networks in the major business districts and choose an architectural theme that is appropriate for each district.
- Attain agreement from every municipality in Mpumalanga regarding the function of the modes to be implemented on the IPTNs and the related efficiencies that they can offer.
- Establish and promote collaborative efforts with the private sector to ensure the effective functioning of a Transport Forum, as this would ensure the inclusion of all the relevant role players.
- Priority should be given to providing non-motorized transportation options along IPTN routes and to public transportation options in the province.
- Guarantee a stable and secure environment and create bylaws for local municipalities in collaboration with district municipalities.
- Establish an environment that will help the National Government Recapitalisation initiative be implemented.
- Complete the planning process of the Mpumalanga IPTN.

6.9 Establishment of Integrated Public Transport Networks

NATMAP 2050 has created a hierarchy of passenger transport routes to encourage mode integration and long-term improvements. Each corridor is made up of a combination of network links and nodes that are determined by the purpose and characteristics of passenger movements. The strategic network categorizes corridors based on their mobility, such as international or inter-regional/inter-provincial, inter-city, and urban-rural.

6.10 Operating Licences Framework Strategy for Increasing or Decreasing Operating Licences

In the Minimum Requirements for the Preparation of Integrated Transport Plans, 2016, is the basis for the strategy. As per the minimum requirements, all DITP's and CITP's are required to produce the OLP and PTP. As a result, the following is required per DITP and CITP produced in Mpumalanga.

- The Public Transport Plan must contain an Operating Licences Plan guiding the award of operating licences.
- Operating licences are required for all public transport service vehicles, whether they are contracted or non-contracted. Provided they operating for a reward.
- The Operating Licences Plan must provide clear guidance to the planning authority, as to which operating licence applications should be recommended or rejected by it. The OLP must provide the planning authority with a reliable and accurate basis for its decisions.
- In respect of non-contracted regular, daily services in the area, it should describe the defined public transport routes or specified groups of routes on which non-contracted services may operate and the number of vehicles of each capacity – type that the planning authority will authorise, having taken into account demand.
- The OLP should also describe the number of operating licences already active on each route or route group and the additional number of operating licences that could be granted on each route where there is an under-supply, or the surplus number of operating licences on each route where there is over-supply.

- In the case of over-supply, the OLP should contain a proposal as to what action the planning authority proposes to pursue to reduce this, for example refuse renewal applications. However, renewal applications should receive preference over new applications.
- The plan should also describe the public transport facilities that are associated with the routes that may be authorised for use by operating licence holders on the routes, taking into account their capacity as determined in the Transport Record.
- The OLP should also describe any conditions, which should be imposed by the PRE/MRE in respect of operating licences, such as duration.
- The OLP must describe law enforcement strategies for maintaining the operating licencing system including institutional arrangements, the inter-relationship with traffic law enforcement and the setting of targets and measuring performance.

6.10.1 Legal Background

The National Land Transport Act (NLTA) No 5 of 2009 (the Act) provides for the process of transformation and restructuring of the national land transport system and includes the regulation of road based public transport. Sections 20 and 23 of the Act provide for the establishment of a National Public Transport Regulator (NPTR) and a Provincial Regulatory Entity (PRE) to consider applications regarding Operating Licences for inter-provincial and intra-provincial transport respectively, subject to the procedures set out in Chapter 6 of the Act.

In the Mpumalanga Province, the Operating Licence function has been assigned to the Mpumalanga Provincial Government that has established a PRE as required by the Act. Applications for Operating Licences received by the PRE (or by the NPTR) must be referred to the relevant Planning Authority (Municipality), which must then indicate if there is a need for the service in terms of its Integrated Transport Plan. Planning Authorities may recommend that the application be accepted or rejected or may attach conditions to the approval.

If the Operating Licence function has been assigned to a Municipality (Section 11 of the Act), then the (MRE) Municipality is responsible for deciding on applications for Operating Licences for public transport services in its area of jurisdiction.

6.10.2 Municipal policies guiding the disposal of operating licences.

Guidance on the disposal of operating licences is given within the following metropolitan policies:

- Integrated Development Plans
- Integrated Transport Plans

Integrated Development Plan:

The OLP's, through the ITP's, responds to the transportation requirements of the Integrated Development Plan (IDP), which is the principal strategic planning instrument of the municipalities. The IDP provides guidance to the development of the ITP and this OLP.

Integrated Transport Plan:

Refer to chapter 4. The province requires that all municipalities prepare an ITP in accordance with the type municipalities requirements as set out in the Minimum Requirements for the Preparation of Integrated Transport Plans, 2016.

6.10.3 Operating Licence Application Process

The following specific process is being catered for in accordance with the NLTA:

- New applications for operating licences.
- Transfer of operating licence or permit.
- Amendment of an operating licence or permit: additional authority.
- Amendment of route or area.
- Change of particulars.
- Amendment of timetables, tariffs or other conditions.
- Replace existing vehicle.
- Renewal of an operating licence or permit.

- Conversion of a permit to an operating licence.
- Application for extension.
- Application for a duplicate licence or permit.
- Application for temporary replacement of vehicle.
- Application for a temporary operating licence (special event).

6.10.4 Legislation controlling the disposal of operating licences.

6.10.4.1 Historical and Legislative Overview

In 1977, the Van Breda Commission of Inquiry recommended less restricted competition and less regulation in the industry (National Taxi Lekota 2020). In 1979, the first national association of black taxi drivers was established, with a focus to deregulate the taxi industry. In 1987 the White Paper on Transport Policy, in conjunction with the Transport Deregulation Act of 1988, deregulated the entire taxi industry, making minibus taxis legal (National Taxi Lekota 2020). The government of the time hereafter essentially lost control of the industry (National Taxi Lekota 2020). This resulted in an escalation in taxi violence and intimidation. In 1995, the government established the National Taxi Task Team (NTTT). The NTTT's first report in 1996 recommended the re-regulation of the taxi industry to reduce violence (National Taxi Lekota 2020). This led to The National Land Transport Transition Act, Act No 22 of 2000 ("Transition Act") (NLTIA), to formalise and re-regulate the taxi industry.

The permits for taxi operators, prior to 2000, were usually issued with radius or area permits. These permits allowed taxis to operate within a defined radius and or area developing the highly flexible mini-bus taxi industry. In 1996 the National Taxi Task Team (NTTT) produced a Final Report on 6 August 1996 where the NTTT recommended that permits should be route based, describing the route or routes in detail, to avoid conflict and violence. This resulted in the NLTIA part 9 continuation and conversion of existing permits for mini-bus taxies to be converted to operating licences (OL) and specify the route or routes in detail, as indicated in the WC road transport act amendment law, 1996. The NLTIA was replaced by the National Land Transport Act 5 of 2009 (NLTA) on 8 December 2009. The regulations made under the NLTA provide that all new OLs for minibus taxi-type services and scheduled bus services must specify routes in detail that they operate on, and the type of service operated. The regulation of the OL is the responsibility of the PRE (NLTA Act 5 2009). In association with the acts, the minimum requirements for the preparation of ITP were amended and subsequently revised in 2016 which specify the information and assessments of the public transport records in the TR required for developing the PTP and OLP.

6.10.4.2 Legislation Controlling the disposal of OL's.

Legislation controlling the disposal of OL's has been promulgated National Government, namely:

- National Land Transport Act (Act No. 5, 2009) and regulations.

NATIONAL LAND TRANSPORT ACT, 2009

The principal Act controlling the provision of public transport in South Africa is the NLTA (Act No. 5, 2009). The NLTA represents the most significant change in land transport in the history of the country with a complete shift from a supply-driven system to a demand driven system based on transport plans.

6.10.4.3 Responsibilities of a planning authority (pa)

In Section 11 of the Act, the responsibilities of the municipal sphere of government are described in detail. This includes:

- The development of land transport policy and strategy within its area.
- Promulgating municipal by-laws and concluding agreements as appropriate.
- In its capacity as PA, preparing transport plans for its area.
- Encouraging and promoting the optimal use of the available transport modes.
- The planning, implementation and management of modally IPTN's and travel corridors.
- Further the Act requires in Section 14 that a PA (defined as a municipality in relation to its planning functions) must –
- Prepare an ITP for its area.
- Perform the constitutional transport functions listed in Parts B of Schedules 4 and 5 of the Constitution.

- Supply directions to the entities responsible for the granting, renewal, amendment or transfer of OL's in terms of their integrated transport plans.
- Perform any other transport-related functions assigned to them in terms of the Constitution and the NLTA.

6.10.4.4 Legal requirements pertaining to the disposal of applications for OL's.

The NLTA requires the establishment of a NPTR and PRE's (Sections 20 and 23 respectively) to, inter alia, receive and decide on applications relating to OL's for inter-provincial and intra-provincial services respectfully.

The NLTA allows the Minister to assign the OLF to municipalities. In Section 18 it is required from a municipality to whom the OLF has been assigned, to receive and decide on applications relating to OL's for services wholly in their areas of jurisdiction, excluding applications that must be made to the NPTR or a PRE.

In Section 36(6) the NLTA requires that: every PA must make its ITP available to the NPTR and relevant PRE and provide direction to them relevant to applications for new OL's, in the prescribed manner.

Section 55(5) must dispose of an application in accordance with the direction given by the planning authority and may NOT grant an operating licence contrary to the directions of the integrated transport plan and planning authority.

Chapter 6 of the NLTA deals with the regulation of road-based public transport. Matters that are covered in the NLTA include:

- The rationalisation of existing scheduled and of minibus-taxi type services Sections 47 to 49).
- Entities that must issue OL's (Section 51).
- Validity period of OL's (Section 52).
- Processes for the application for new services (Section 54), OL's for public transport services provided for in transport plans (Section 55), OL's for contracted services (Section 56), disposing of applications with regard to OL's for non-contracted services (Section 57) and renewal, amendment or transfer of OL or permit (Section 58).
- The content of an OL is described in Section 62.
- The issuing of OL for a range of supplementary modes and/or services is dealt with in Sections 65 to 72.

The following modes/services are covered:

- Long-distance services
- Metered taxi services
 - Charter services
 - Staff services
 - Lift clubs
 - Tuk-tuks
- Adapted light delivery vehicles.
- Transporting of scholars, students, teachers, and lecturers.
- The regulation of tourist transport services is covered in Sections 80 to 84.

6.10.5 Framework for the disposal of operating licences

The previous sections of this chapter presented the principal documentation on which the framework for the disposal of OL's is built. This section presents the framework itself, which comprises a statement of its purpose, followed by policies to guide the municipalities when making their directions and representations to the PRE.

The framework must, however, always be read in conjunction with national, provincial and local policy and does not supersede these documents nor any legislation on the matter. As part of the policy and framework, the purpose of the framework, types of public transport services that require operating licences and the types of vehicles that can be used for public transport are detailed and clearly discussed in the framework policy. Moreover, the operating licence strategy and framework for contracted and non-contracted services is discussed and detailed.

6.10.5.1 Operating Licence for contracted services

The municipalities shall include in their considerations when providing its directions to the PRE with respect to an application for the granting, renewal, amendment or transfer of an OL for a contracted service, the following:

- The availability and improvement requirements of terminals and bus stop facilities on the route in question for boarding and alighting of passengers.
- Whether the application is supported in light of the District and Local Municipality transport plans; and
- Any other recommendations or representations the municipalities may have in relation to the application.

6.10.5.2 Operating licences for non-contracted services

The municipalities will include, in its considerations when providing direction and making representation to the PRE with respect to an application for the granting, renewal, amendment or transfer of an OL for a non-contracted service, the following:

- The availability of ranks or terminals or other facilities or spaces for boarding or alighting, or holding or parking of vehicles;
- Whether the application is supported in the light of its transport plans (ITP);
- Whether or not the public transport requirements for the particular route or routes are adequately served by an existing public transport service of a similar nature, standard or quality provided in terms of a commercial service contract or subsidised service contract, or in terms of operating licences as shown by the relevant transport plan;
- The existence of any by-law, regulation, prohibition, limitation or restriction that is relevant to the transport service that the applicant proposes to operate;
- The period for which the operating licence should be issued; and
- Any other direction or representation the municipalities may have in relation to the application.

When in receipt of an application for an OL for long distance services, the municipalities will also take into account:

- The days of the week or month and time of day for departure; and
- For a minibus taxi-type service, those passengers may not be picked up or set down en route unless the operator has reached agreement in this regard with the municipality, other relevant transport authorities and with the taxi associations operating locally in the area concerned.

When in receipt of an application for an operating licence for a metered taxi service, the municipalities will consider the latest version of its operation plan for metered taxi. Services that have been developed with the industry, as well as best practise in the absence of such a plan.

Regarding applications for OL's for tourist services, the municipalities give preference to tour operators since it deems services of a predominantly shuttle/transfer nature more suited to other types of transport services, such as charter services.

6.10.5.3 Validly Period for Operating Licences

No OL's may be issued for a period not exceeding seven years except where a negotiated contract has been awarded, in terms of Section 41, to an operator for more than seven years; then such OL must be awarded for the period of the contract (NLTA Section 52).

When considering its representations and directions to the PRE with respect to the validity period of an OL for non-contracted services, the municipalities may include the following:

- Current and envisaged trends in utilisation on the route, routes, or in the particular area;
- Efficiency of the proposed services in meeting user needs;
- Likelihood that, in the future, the public transport services for which the application is being made may no longer be required in terms of the relevant transport plans; and
- Likelihood that the public transport services for which the application is being made may become the subject of a commercial service contract or a subsidised service contract.

In addition, OL's for charter services, long distance services, staff and tourist services, must be for a fixed period.

6.10.5.4 Cancellation of OL's not brought into use (section 78)

The municipalities may bring to the notice of the PRE that an OL converted from a permit has not been brought into use within 180 days. It may also bring to the notice of the PRE that a service authorised by a permit or an OL has not been observed by the relevant municipalities to operate and may therefore not be faithfully carrying

out the conditions or the requirements of the authority (Section 78 (5)). The PRE may then call on the holder to give good reasons why the authority to operate that service should not be suspended or cancelled.

6.10.5.5 Withdrawal of OL's in rationalisation of public transport services

Section 39, of the NLTA, requires that the planning authority must, where possible, offer the operator an alternative service; or allow the operator to continue to operate and impose a moratorium on the issuing of new OL's on that/those routes.

Section 39(2) makes provision for the National Minister to make regulations on the procedures to be followed.

6.10.5.6 Special needs passengers

The municipalities will consider the needs for special categories of passengers when making representations and providing direction to the PRE with regard to applications for OL's.

6.10.6 Operating Licence Strategy

6.10.6.1 Types of Operating Licences

Operating Licences may be issued for the following types of services:

- Minibus Taxi Services
- Scheduled Services
- Unscheduled Services
- Contracted Services.
- Non-contracted Services.
- Special Events.
- Long distance Services.
- Metered taxi Services.
- Staff Service.
- Scholar Transport.
- Tourist transport Services

6.10.6.2 Evaluation process

The Planning Authority follows a procedure to review each new Operating Licence application that it receives. The application to NPTR for an operating license for an interprovincial service should follow the procedures outlined in the National Land Transport Act, 2009 (Act No. 5 of 2009) chapter 1, which includes the following:

- (2) An application form may be submitted by hand either to an NPTR office or any PRE office, or by e-mail, post, or fax to the NPTR, and if submitted by e-mail must include a scanned version of the required documents.
- (3) The NPTR must issue a receipt to the person lodging the application where it is submitted by hand, or acknowledge receipt by e-mail, post, or fax if the application was submitted by one of those methods, on the day of receipt or if received over a weekend or on a public holiday, on the next working day.
- (4) The NPTR must reject an application where the application form is not fully and properly completed, or to which required documents have not been attached, or where the required fee has not been paid, and may require the applicant to submit the original of any document before accepting the application if it suspects the validity or authenticity of the document.
- (5) The NPTR must notify the following by e-mail or fax of an application received under sub-regulation (1):
 - The PRE of every province in whose area passengers will be picked up or set down; and
 - (b) every planning authority in whose area passengers will be picked up or set down; and those PREs and planning authorities must supply their comments or recommendations to the NPTR by e-mail or fax within the time specified in the notice, which may not be more than 30 days.

- (6) Where the planning authority does not have an adequate ITP or is otherwise unable to respond in a meaningful manner, it must still submit a response stating the reasons why it is unable to respond.
- (7) Where a PRE or planning authority fails to respond to such a notice within the specified time, the NPTR may proceed to process and decide upon the application without their input.
- (8) A notification in terms of sub-regulation (5) must be in accordance with the form shown in Schedule 1 and contain particulars sufficient to enable the PRE or planning authority to submit a response based on relevant transport plans.

(9) The NPTR, PREs and MREs must conclude a written agreement in terms of section 26 of the Act to facilitate the submission of applications and communications between them.

6.10.6.3 Granting Operating Licence

In accordance with the NLTA Act 5 2009 and the statements above, where a transport plan shows a need for additional services, on a route or routes in its area, the municipality to which the operating licence has been assigned may invite applications for OL's to provide those services (NLTA Act 5 2009). The applicants must amongst other requirements:

- Be on the basis of one application per vehicle;
- In the case of a minibus taxi service, must include a detailed description of the route or routes on which the applicant operates or intends to operate and all points where passengers will be picked up and dropped off.

However, before the PRE considers any application for the granting, renewal, amendment or transfer of an operating licence, the PTP for that time period must be completed (NLTA Act 5, 2009). The plan must indicate whether there is a need for the service on the route or routes in the area based on the analysis obtained from the information in the TR.

The data collected to develop public transport plans is done through the TR minimum requirements tables for public transport as per the Government Gazette, No 40174, 2016. During this process, the public transport facilities, route descriptions, routes as identified by facilities, fares, utilisation, peak fleet demand per route, corridor capacities, cordon information and route demands for public transport in an area must be captured, (Government Gazette, No 40174, 2016). This information does for the most part identify route and rank utilisation, fares, cordon information etc. Furthermore, the TR specifies that the route descriptions must be in sufficient detail that it can be captured on a GIS system, and as per OL and the OLAS.

With the amendment of the NLTA act, the permits were altered from radius/ area permits to precise defined routes. Therefore, the route descriptions of the routes in operation are required in detail for all routes in operation, even those without route codes. This can be prepared by assessing route codes on vehicles from the rank surveys and the OLAS database route descriptions using tables 5, 6 and 7 form the Government Gazette, No 40174, 2016. The unregistered routes can be obtained through consultations with the industry. It is also noted that a single vehicle may have an OL's with multiple route codes.

In accordance with the DITP, CITP and LITP documents. There is a major gap in information regarding the Transport Registers and Public Transport Plans. In addition there are major gaps in the LITP and CITP documents. Below is the required frequency of plan preparation for transport plans.

Plan	Frequency		comments
	PREPARATION	UPDATE	
1. Comprehensive ITP (CITP) and District ITP (DITP)	Total overhaul every 5th year	Annual update of selected aspects, in synchronisation with the IDP.	Update to focus on action programme and budget. Prerogative of PA to do more comprehensive update.
2. Local Integrated Transport Plan (LITP)	Prepare every five years, as input to new DITP in the case of local authorities that fall within a district municipality	Update the budget and programme for the following year annually , in synchronisation with the IDP.	
3. Transport Register (forms part of ITP)	Total overhaul every 5th year	Update the TR if any significant new data collection occurs. GIS, databases and information	Update to concentrate on gaps and information of poor quality.

		systems to be updated on an ongoing basis, as and when new information is collected.	
4. Public Transport Plan (forms part of ITP)	Total overhaul every 5th year	Report annually on contracts that have been awarded or which have expired and any changes or additions to the proposed contracted services network. Database of operating licences should be updated on an ongoing basis as OLs are awarded, lapse, or are renewed.	

The strategy is to ensure all TR, PTP, LITP, DITP and CITP plans are prepared for all municipalities dependent of type. These need to be in place in order to develop the Operating Licence plans and to develop the IPTN systems in the districts as described in the existing DITP documents.

6.11 Rationalisation and subsidy Strategies

The Rationalisation Plan remains a means by which the public transport competitive landscape can be restored. It serves as a catalyst for order and helps public transport operators to portray their professional posture. The principal aim of the Rationalisation Plan is to minimise competition between subsidised services, including services across the borders of planning authorities. Most importantly, a Rationalisation Plan should assist in determining how subsidies should be minimised or increased, depending on those that are dependent, and how they should be implemented. At this stage, subsidies are managed by the province with funding provided by the Department of Transport. It is therefore crucial that the province be involved at all stages in making decisions related to subsidised services. The funding allocations are made through the Division of Revenue Act in the form of a conditional grant known as the Public Transport Operations Grant (PTOG).

The bus services currently fall under the competency of the Provincial Government. This function was devolved to the provincial government in 1997. The Provincial Government is responsible for aspects such as regulation and control of the bus operations, planning, implementation and monitoring of bus services, through tendered contracts, as well as management of bus subsidies.

There are basically four types of bus operators who currently operate passenger transport services in South Africa. These include:

- Privately owned, state subsidized operators
- Privately owned, non-subsidized operators
- Parastatal state subsidized operators
- Municipal operators

Furthermore, there are four types of subsidised bus services in the country, and these include:

- **Tariff Subsidy Scheme:** This type of scheme makes it possible for commuters to pay less than the normal fare and the operator is paid the balance by the government in the form of a subsidy. This result in the operator receiving the full economic fare made up of the passenger contribution and the government's subsidy payment. The passenger benefits by paying a lower fare, and the subsidy is paid to the service provider.
- **Competitive Tendering:** The operators tender for the right to operate subsidised services. This system aims at promoting a degree of off the road competition between operators. Various ways can be used to structure these tendered contracts. This kind of service has constantly been monitored to ensure that an appropriate level of service is maintained, as penalties are imposed for failing to meet set standards.
- **Negotiated Contracts:** These are based on contracts documents similar to those drawn up for the competitive tenders, and operators are also paid a rate per revenue kilometre. The negotiated contract can only occur once and for a 12-year period.
- **Interim Contracts:** These contacts are operated on a month-to-month basis and are commonly used in areas where the competitive tendering system is not utilised.

In accordance with the NLTA Act 5 of 2009 chapter 5 sections 40-46 details the steps and requirements that provinces and planning authorities must take to integrate services subject to contracts in their areas, as well as appropriate uncontracted services, into the larger public transport system in terms of relevant integrated

transport plans. Section 41 guides the negotiation of these contracts while section 42 refines the subsidy of these services.

In accordance with the National Public Transport Subsidy Policy December 2023 Gazetted in February 2024 the NPTSP 2023, identifies major issues that has led to the need for a refined subsidy policy. These are:

- Mini-bus Taxi services across the country has been the highest utilised mode of transport for several decades though receiving a minimum direct funding intervention by the Government. The major issue is that these services are not subsidies. This creates the problem that service improvement or more affordable services would be difficult within the short time frame without a form of additional subsidy.
- The existing contracted bus services have been continuously engaged on the short-term interim basis for nearly two decades. This creates an inability for the bus companies to make significant investments for long term planning. This also leads to aging vehicles which results in reduced services, missed trips, safety issues and passenger discomfort.
- There has been increased passenger rail subsidy with a deteriorating service. This has not translated into additional passengers making the subsidy disproportionate to the mode choice.
- lack of integration of public transport
- Spatial planning and the existing spatial conditions
- Lack of funding for transport
- Failing and outdated rail infrastructure
- Rural Transport challenges
- Scholar transport remains a challenge
- Current cost of public transport for the poor
- Disproportionate spend of public transport subsidy- per modes is unclear
- The allocative efficiency of the current public transport funding is not clear
- Public transport is receiving disproportionately little funding relative to its role in the economy and society at large
- Current public transport funding does not incentivise innovation
- Public transport funding is done in isolation of other built environment initiatives

From this the policy guidelines developed a vision, mission and goals as such:

Vision:

"A public transport system that is fully supportive of sustainable development goals"

Mission:

"Establish clear objectives for public transport subsidisation, and provide appropriate models for policy implementation, and a costing methodology, founded on the principles that public transport subsidy should be user targeted, equitable and sustainable in the medium to long-term."

The policy developed the following goals:

- To support the vision and goals of the 2021 White Paper on Transport
- To support the goals and objectives of the key sectorial development policies and strategies
- To demonstrate the transport funding shortfall and provide a rationale for the provision of sufficient funding
- To provide a rationale for adequate spatial distribution of public transport funding
- To provide a rationale for the adequate provision of funding of public transport services in relation to varying operating conditions across the country
- To provide an efficient approach to approve public transport funding and subsidies in response to efficient transport plans
- To promote planning of integrated transport systems encouraging the accelerated transformation of the prevailing public transport industry
- To promote planning of efficient and cost-effective transport systems in the context of sustainable development of local communities

The goals translated into policy statement bench marking for the subsidy policy:

Table 6-2: Goals of the NPTSP December 2023

Goal	Bench Mark
Minimise system input costs for public transport services	Urban areas: Personnel costs as % of operating costs limited to maximum of 25% of operating costs for road based; and up to 40% for rail-based services.
Minimise impact to the environment	Achieve a system level maximum 50 grams CO2 per passenger km, for motorised travel.
Minimise trip length	Maximum trip length of 40km one way for work trips. Maximum of 10km for education trips.
Minimise motorised travel	Maximum 2.5 trips per person per day without compromising basic needs.
Minimise crashes	Toward Zero fatalities per 100 000 population.
Direct cost of transport to society as % of GDP	§ Less than 7%.
Reduce total travel time	Limit travel time to 40 minutes for work trips on public transport. Limit travel time to 30 min for education trips. Limit travel time to 1 hour for all other trip purposes.
Reduce total travel time	Limit expenditure on transport to 10% of income for person with income. Limit cost of service to less than 10% of minimum living level for persons from poor households. Scholar transport service to be provided at no cost to learners whose nearest school is more than 3km away from home.
Reduce total travel time	Public transport on an approved network must have a minimum operating speed of 40km/h during the peak.
Reduce total travel time	At least 80% of persons with disabilities should indicate that they are able to use public transport without difficulty.

The goals above, developed the NPTSP policy. The policy is underpinned by the following drivers:

- Public transport subsidy principles_ To achieve the goals listed above.
- Public transport subsidies will be implemented to achieve goals in transport plans.
- Public transport subsidies will be managed by municipalities.
- Public transport will be cost recovery based apart from the scholar transport.
- Public transport subsidy will consist of both operational and capital support.
- Operating subsidy will increasingly be administered through information technology
- Differentiation of urban and rural areas.
 - Rural areas will have proportionately more subsidy per km
 - This is to make allowance for historical legacies
- Mode specific financing:
 - There will be no differentiation of public transport modes.
 - Rather, subsidy will be paid on the basis of a transport plan that incrementally achieves specific goals
 - The subsidised network will be serviced by a combination of modes of transport
- Governance and administration
 - No municipality should be a public transport operator
 - The municipality may own public transport infrastructure and associated systems.
 - Subsidisation of public transport will be subject to systematic monitoring and evaluation to ensure that it achieves set transport goals.

Based on the above policy and to alleviate the challenges seen in the public transport sector, the following interventions were proposed in the NPTSP 2023:

- Evaluate possible additional capital subsidy funding of the minibus-taxi operators through increased budget for “scrapping” allowance through the Taxi Recapitalisation Programme on the per application basis.
- Evaluate appropriate technology solutions to introduce a cashless and automatic fare collection (AFC) for the minibus-taxi services whilst appreciating the prevailing business model of the industry.
- Promote and implement a system of competition for the market in the short term related to public transport routes based on operating licenses, concessions and negotiated and tendered contracts with all public transport operators registered as formalized commercial entities.
- Road network asset management systems must be updated to ensure that roads used by public transport received maintenance priority, alongside existing prioritisation metrics.
- Work to recalculate the funding and budgets for public transport in the country.
- Review of the National Rural Transport Strategy and the development of a rural transport policy and finally the development and implementation of Rural Integrated Public Transport Networks (RIPTNs).
- Contracted scheduled bus services managed by provinces at present in IRPTN areas are to be taken over by municipalities and should form part of the ITPs.
- Providing assistance to the MBT industry to consolidate its thousands of individual operators into companies operating fleets of taxis on behalf of shareholders and in so doing contract with government.

In Mpumalanga, many of the national issues persist such as expensive public transport, rural and scholar transport concerns, unscheduled systems, long trips, conflicts with the different industries, funding etc. As such the goals as developed for the NPTSP 2023 can be translated to the needs identified in the this chapter for public transport. Moreover, the concerns regarding MBT industry and subsidising its services is a large conflict point in the province.

In accordance with the minimum requirements for integrated transport plans, network “proposals must be developed, based on the assessment of the status quo and the policies, for the rationalisation and restructuring of the existing contracted services, the development of new contracted services, and the restructuring of the non-contracted services.

The planned sequencing of network implementation should be described, including the timeframes for the conversion of any expired interim, negotiated and tendered contracts, and the introduction of new contracts. A short-term and long-term plan for contracted services should be set out. In the short term, its focus must be on transforming interim subsidised contracts, tendered contracts and to include the uncontracted services as per section 40 and 41 of the NLTA 2009 chapter five into negotiated 12-year contracts or subsidised service (tendered) contracts in accordance with the Act. The longer-term plan should deal with the introduction of tendered contracts and the overall restructuring of the subsidised public transport system, including rail, after the initial new contracts have run their course.”

Based on the above the following strategy is recommended:

- Ensure each district municipality updates the transport register (TR) and Public Transport Plan (PTP).
- Ensure the Mbombela IPTN plan is updated, and the business plan is updated.
- Ensure the Mbombela CITP, TR and PTP is updated.
- Ensure that the NDM ITPN business plan is updated.
- Hereafter, the province is to develop **guidelines for a uniform Rationalisation Plan**, which can be applied by all districts. The rationalisation of existing routes will be difficult due to the existence of duplication, competition, conflicts and inefficiencies that presently exist. It is recommended that a full investigation on the duplication, competition and inefficiencies of existing routes be implemented, and recommendations be set forward for implementation. In order to rationalise the bus routes in the DMs, one will have to look at all the passenger transport role players for participation and contributions. It is recommended that an integrated transport design, which includes taxis and buses, be pursued.
- Through the NDoT enter into discussions with the un-contracted services regarding the process for subsidisation and what is allowed for through the act and the NPTSP 2023.
- For the IPTN plans and industry transition to formalise public transport in the Mpumalanga province, the following structure per district can be developed as a framework for the business plans:
 - Operational Plan
 - Infrastructure Plan
 - Public Transport Industry Transition
 - Vehicle operating company (VOC) requirements

- Industry Transition
- Organisational Structure
- Lessons learnt on VOC
- Training of mini-bus taxi operators and owners of the VOC
- Public Transport Services Contracts
- Institutional structure and responsibilities
 - Responsibilities
 - Environmental needs
 - Cost and time saving needs
 - Communication and awareness
 - Passenger needs
 - Road traffic and corridors
 - Ticketing and fares
 - Operational requirements
- Oversight Company:
 - Monitoring and administration of the contracts
 - Fare management and revenue collection
 - Financial administration
 - Marketing and branding
 - Maintenance and cleaning of facilities
 - Safety and security
 - Transport Planning
- Fleet and depots ownership
- Stakeholder engagement
- Funding Model
 - Financial Model
 - Risk Analysis
 - Socio Economic Analysis
 - Subsidy analysis
 - Cost Benefit analysis
- Implementation Plan
- The above plans can be included in the ITP and TR development as required through the local and district municipalities.
- Possible rationalisation techniques over and above the existing transport register surveys include onboard surveys of all public transport services in the province:
 - Routes travelled by organisations of both contracted and non-contracted services.
 - Boarding and alighting information is captured along all routes.
 - Off peak/ Peak periods are both travelled.
 - Normal weekday, Friday and end of month Friday and Saturday capture.
 - Sessional peaks are identified and captured.
 - Long distance and cross board trips are identified and recorded.
 - Travelled routes are GIS mapped.
 - The SDF plans are mapped, and new developments and serviced areas are identified and rationalised.
 - Routes, networks and demand profiles are optimised, and a rationalisation plan is developed.
 - Ward based sample questionnaires that define new destinations and operations through community involvement.
- Though the information and rationalisation in the PTP regarding the different contracts and non-contracted services can optimise the routes and update the operating licences in the PRE OLAS data base, as well as lead to formalising the Mpumalanga public transport network.
- Rationalise the operations based on the OL strategy in section 6.9.
- Enter into contract discussions based on the rationalisation plan and PTP based on the most appropriate contract with the affected organisations, as per the NLTA 2009 chapter 5.
- Optimise the subsidies as per the contract discussions, tenders and negotiations.

Regarding social services, such as rural services:

- Through the PTP and various ITP documents identify gaps in the operational coverage of the public transport system.
- Engage and negotiate with public transport operators to enter a contracted service to ensure these persons and or communities gain access and mobility.

- Work in accordance with the national rural transport strategy.

Again, the TR's and PTP need to be updated in order to rationalise the public transport networks.

6.12 Passenger Rail Services

The Mpumalanga rail service is currently inoperable; though, residents have pleaded for its return. Residents stated that the train was safer and more cost-effective than a vehicle and that its use would also benefit the province economy. NATMAP 2050 has developed interventions for South African rail infrastructure that will benefit the Mpumalanga region as well. Rail priorities and initiatives for several districts in Mpumalanga have been defined, which will considerably benefit both passengers and the province's economy.

In the proposed passenger rail system, PRASA operates the Metropolitan rail commuter system, and Shosholoza Meyl, a PRASA subsidiary, provides long-distance passenger services. In accordance with PRASA Historical analysis and in line with the PRASA recovery plan, PRASA Gauteng Mpumalanga line operated to Komatipoort station through the Shosholoza Meyl long distance PRASA operations transported an annual passenger flow of 119 737. Moreover, in accordance with the NATMAP 2050, there is planned core Meyl S-Route to operate again to Komatipoort.

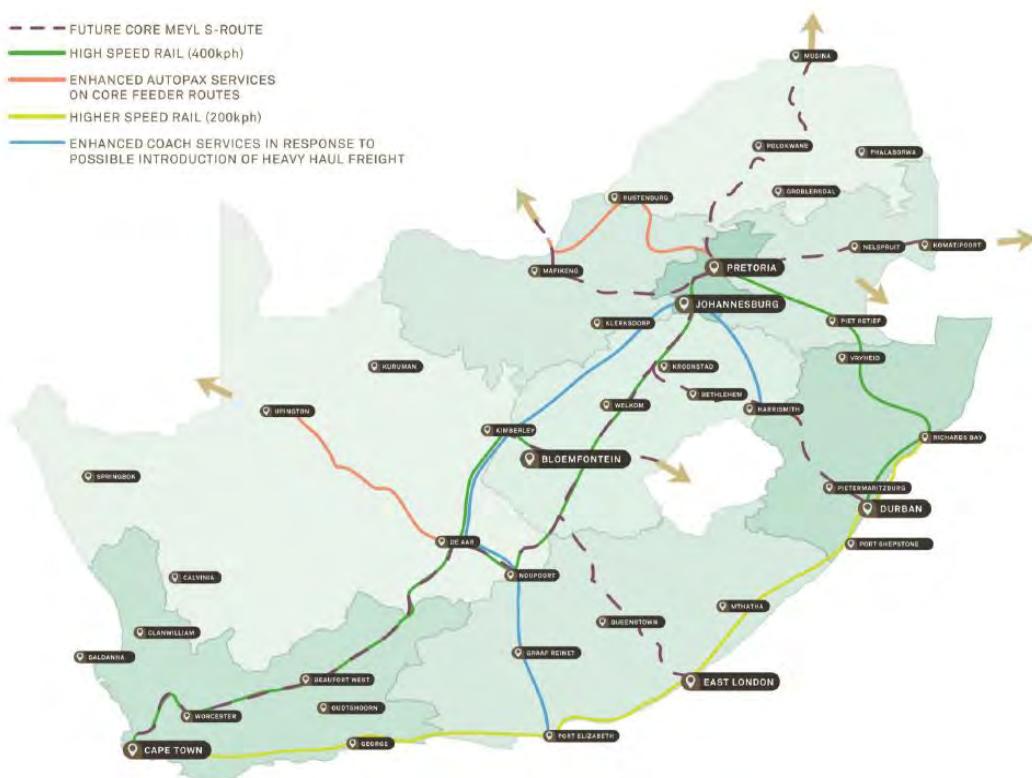


FIGURE 8-14: PRASA: FUTURE LONG DISTANCE PASSENGER NETWORK (Source: PRASA)

Figure 6-3: NATMAP 2050 Future PRASA long distance routes

The strategy for the Mpumalanga PLTF is to support the rail initiative of the S-Route to restart as this route falls in the high strategic corridor of the N4 Maputo corridor. Engagements with PRASA are required indicating station upgrades and road based public transport feeder routes to ensure integration between modes. The second strategic rail corridor is the Moloto Rail Corridor.

In accordance with PRASA website:

"The Moloto Rail Project's main objective is to ensure that passenger rail as the backbone of an integrated multi-modal transport system using proven state of the art rolling stock and equipment. In addition, this rail project would serve as a catalyst for economic development initiatives within and around the Corridor resolving challenges of safety, efficiency, reliability, affordability and overall integration with other public transport services.

The Moloto Development Corridor has its main objective to increase speed for buses from 70km per hour to 100km/h and from 160km/h to 200km for standard gauge trains, thereby reduce travel time for commuters. This part of the government's policy to develop an inter-modal transportation solution and involves the following catalytic projects:

- 13 new train stations
- Koedoespoort Rapid Rail Alignment (117km of dual track)
- Modal Integration Points
- Surface 240km of feeder routes
- Tshwane Bus Rapid Transit
- New Dual 67km Carriageway from Siyabuswa to Moloto
- Mamelodi East and Greenview Pienaarspoort Alignment"

The strategy is to support the development and engage with PRASA, DoT and the local municipalities regarding feeder services, IPTN and spatial planning along the corridor and around the proposed stations.

6.13 Strategic Corridor Development

The IDP and SDF chapter 4 has indicated future settlement and economic development opportunities that should be channelled into activity corridors and nodes that are adjacent to, or that link the main growth centres. Infrastructure investment should primarily support localities that will become major growth nodes in South Africa and the SADC region to regional gateways to the global economy.

The spatial distribution of flagship projects from the economic development strategy and Spatial Rationale perspectives reveals four major development corridors in the Mpumalanga Province with an additional six support corridors.

6.13.1 Maputo Development Corridor

The N4 or Corridor is economic transportation corridor linking Gauteng and the Maputo harbour. The Maputo Development Corridor passes through Nkangala and Ehlanzeni Districts supporting the Maputo railway line. The corridor provides access to 8 local municipalities and their connected towns within the direct range. The corridor serves 48% of the total Mpumalanga population which is approximately 2.06 million people and accommodates 64% of the provincial economy.

This corridor is also one of the 15 Key national corridors as per the NATMAP 2050. The current road N4 is managed by TRAC as a concessionaire. The concession will end in 2027. SANRAL is the owning organisation of this corridor.

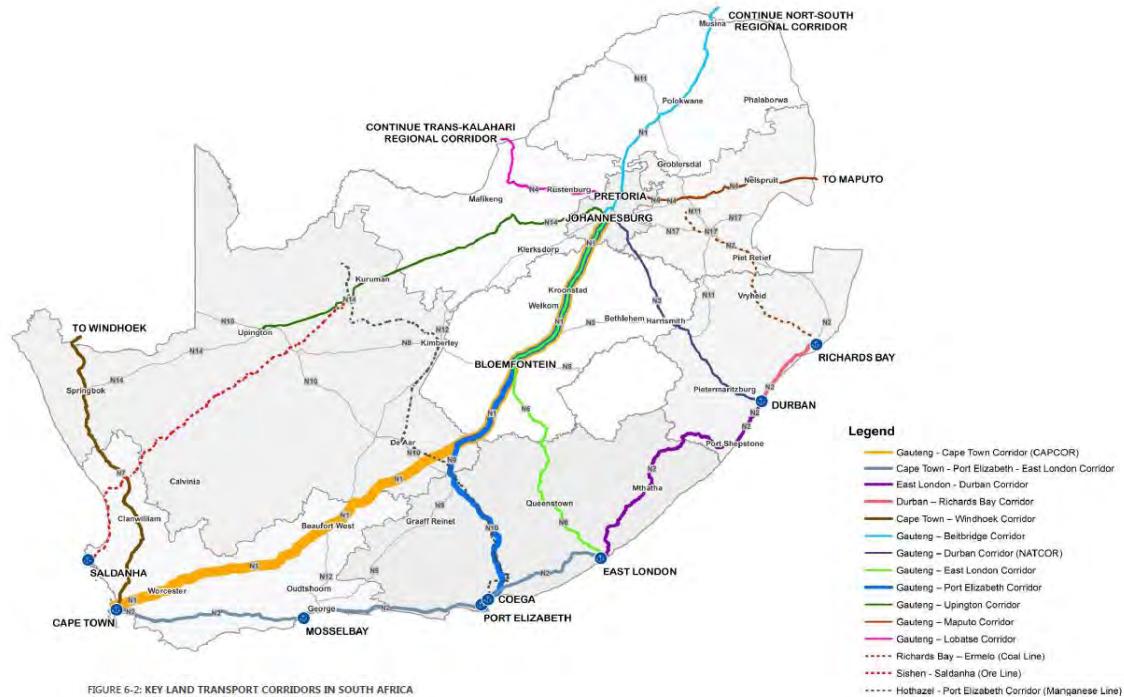


FIGURE 6-2: KEY LAND TRANSPORT CORRIDORS IN SOUTH AFRICA

Based on the spatial SDF and importance of this corridor to both South Africa and the province, concise planning is needed to ensure that congestion does not build up on the corridor due to spatial planning developments.

Moreover, there is an existing rail line (owned by Transnet) that operates in this corridor to the border. Of importance to the public transport chapter, this rail line has a long-distance passenger operation that is currently suspended. This operation is operated by PRASA. However, this line used to transport over 119 000 passengers per year. In accordance with the NATMAP 2050, this line is indicated as a future Shosholoza Meyl S-Route indicated in section 6.10.

The strategy the DPWRT needs to adopt is to support the development of the corridor and ensure planning between municipalities, SANRAL and DoT ensures a prosperous corridor. Furthermore, the rail operations along the corridor will require a rationalisation of the road based public transport. Regarding the Plans to enhance the road network, innovative solutions to improve existing road conditions and expanding capacity on critical routes, such as the Maputo Development Corridor (N4) are being investigated through the RI-AMS project. The improved road infrastructure planned along the N4 corridor will improve public transport integration and efficiency connecting to the corridor and local public transport connecting to long distance routes. As part of the ITP iterations for the local and district municipalities, routes and infrastructure to improved accessibility and mobility along the corridor including new spatial planning from the local, district and provincial SDF documents, needs to be planned and implemented in the appropriate development stages. This will enhance integrations, access to opportunities and economic growth.

6.13.2 N17/N2 Corridor

The N17/N2 corridor serves as access corridor between South Africa and eSwatini along with the coal haulage corridor to Richard Bay. Around 20% of the Mpumalanga population is served through the N17/N2 corridor which is approximately 844 206. The corridor provides 23% of the provincial economy with 1.3% growth per annum. As per the proposed Govan Mbeki Secunda IDZ, economic activity node, which is a part of petrochemical cluster provides an opportunity for the production of petrochemical, chemicals, speciality chemicals and any supporting cluster. Furthermore, it is significant rail freight operation that moves between Mpumalanga and KZN.

Based on the significance of the corridor, there are economic opportunities along the corridor. Furthermore, there is 20% of the population served through the corridor. However, with the freight movements on road due to the

volume of coal transported, the roads are being damaged and are in poor condition as indicated in section 3. Moreover, in accordance to the DPWRT RAMS and Municipal systems support, the Coal Haul Road Rehabilitation Programme (CHRRP); focused on rehabilitating coal haul routes critical for transporting coal to power stations, ensuring the continuity of coal supply. Indicated that specific efforts include monitoring and implementing remedial works on these routes is underway.

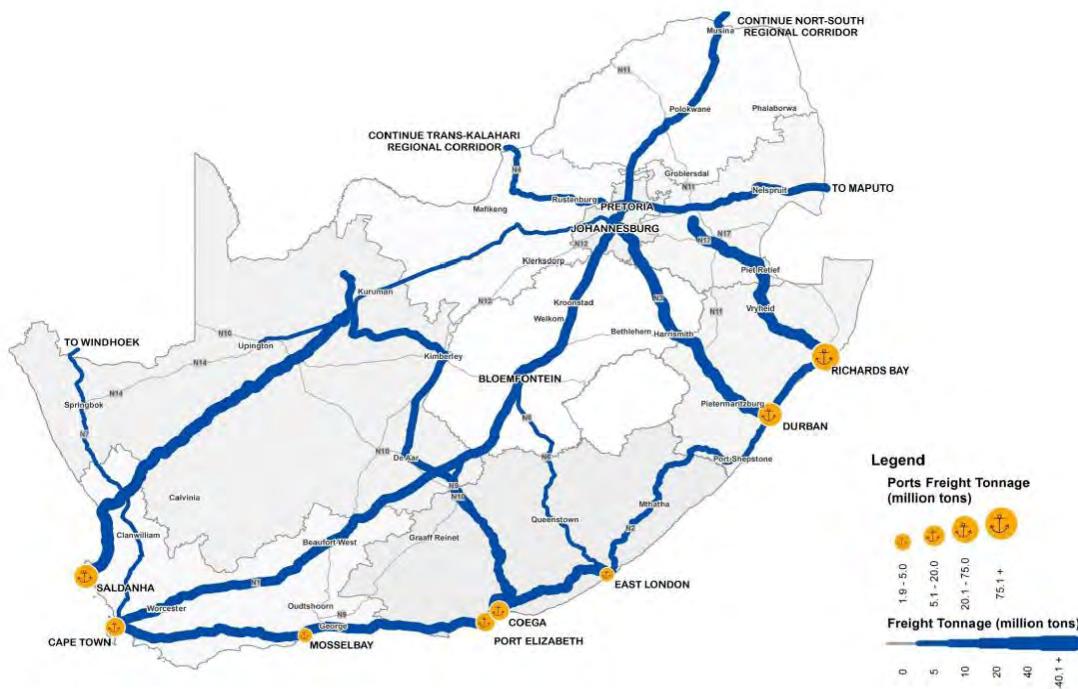


Figure 6-4: Road and Rail Freight in South Africa, NATMAP 2050

6.13.3 N11 Corridor

The N11 is an intersecting corridor of N4 and N17/N2 at Middelburg and Ermelo and linking Limpopo and KwaZulu Natal. The corridor serves the 21% of the provincial economy and also mainly caters to local economies of Steve Tswete and Msukaligwa local municipalities. The corridor is accessed by 16% of the total Mpumalanga population and employs 20% of the population, as shown in the figure below.

6.13.4 Moloto Rail Development Corridor

The R573 (Moloto Road) links Gauteng, Limpopo and Mpumalanga and carries some 50 000 passengers daily. Therefore, the move to bring this road under one Authority (South African National Roads Agency Limited-SANRAL) was always expected to bring more improvements, better coordination and improved investment. To date, certain sections of the road have been completed and the implementation of other short-term interventions is ongoing. An additional R4,5 billion has been allocated to SANRAL over the next five years and this investment will be used to improve safety on this road. Despite the significant progress, Mpumalanga remains convinced that rail is ultimately the best solution for this corridor.

Nevertheless, SANRAL has gone out to tender on the R573 and major road infrastructure improvements are expected. As per the RI-AMS 2024/2025 report, support infrastructure to the corridor is required. This includes increasing the number of gravel to surfaced roads. The improvements will enhance public transport and improve travel times within the district and local municipalities.

6.13.5 R33, R35, R36, R38 Corridor

The R33 is a connecting road from Lephalale to Pietermaritzburg, and the R33 route is connecting Limpopo and KwaZulu-Natal through various parts of Mpumalanga. The R35 is one of the provincial routes of Mpumalanga, connecting Amersfoort with Middelburg. It serves two major towns namely Middleburg and Bethal. Further, it is connected with N17 at Bethal and N4, N11 at Middleburg. It is one of the major routes for connecting two district municipalities in Mpumalanga (Nkalgala and Gert Sibande). The R38 intersects the R40 near Barberton, Badplaas, Carolina, Hendrina, Bethal. These three corridors belong to SANRAL, yet for a major part of the Coal Haulage roads. The maintenance and rehabilitations of these roads by SANRAL is supported by the DPWRT. In conjunction, the DPWRT planned rehabilitation projects that support these corridors in the CHRRP as indicated in the RI-AMP and in section 87 of this report.

In improving the road condition, a reduction in travel time can be achieved as well as a reduction in vehicle maintenance along these roads. This assists a more efficient, affordable and effective public transport network.

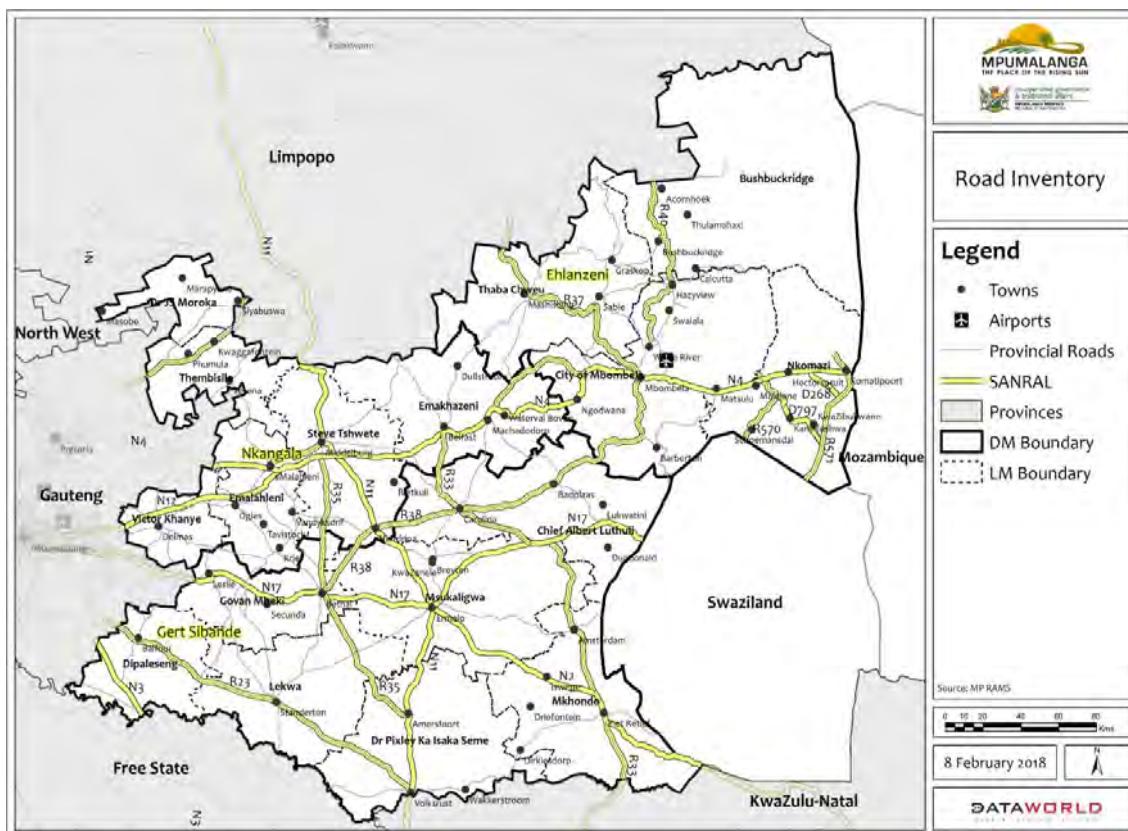


Figure 6-5: Significant corridors in Mpumalanga

6.13.6 R37 Corridor

The R37 is a major provincial route connecting Polokwane to Mbombela. It is connecting two major cities and serving Limpopo and Mpumalanga province. This is a SANRAL Corridor. There are two projects planned regarding upgrades for roads intersection in this corridor as indicated in chapter 8. Again, improved roads to major corridors, such as the R37 gives access to rural communities to major urban centres, such as Mbombela. With improved road conditions, public transport can access these communities efficiently with a reduced travel time.

6.13.7 R538 Corridor

The R538 is a regional route in Mpumalanga intersecting the R40 in Hazyview and the N4 between Nelspruit and Kaapmuiden. The R538 gives access to urban areas, such as:

- Legogote
- Jerusalem
- Mgobaneni
- Swalala
- Numbi
- Nkambeni
- Phola
- Mchushu
- Total Population estimate Stats SA +-75 000 people

The corridor is significant for public transport between these areas, Hazyview and Mbombela. In accordance with the RI-AMP condition assessment, most of this stretch of road is currently in a fair condition.

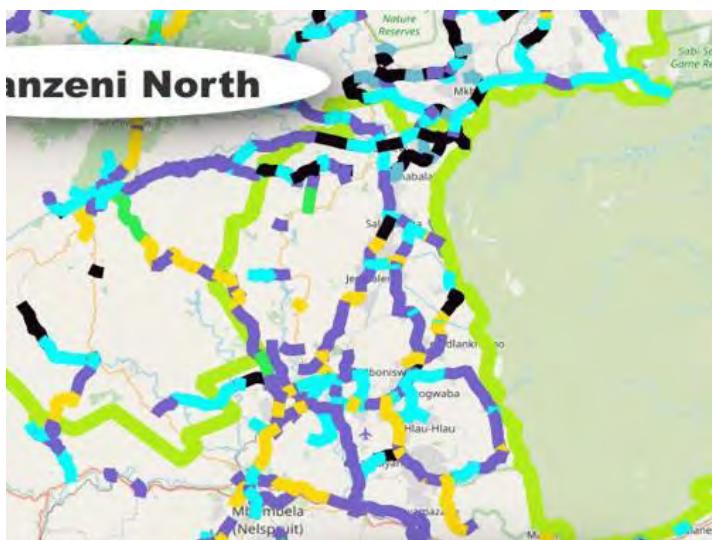


Figure 6-6: Extract form the road condition GIS RI-AMP map of the area

6.13.8 Midleni Development Corridor

This refers to the R555 between Middleburg and EMalahleni, as well as the rail corridor. This corridor is significant based on its commercial, industrial and residential activities, as well as its feeder connectivity to the Maputo Corridor. According to the NDM DITP 2022-2025, the following 3 projects were seen as the best aligned to the NDM needs:

- Agricultural Hub.
- Logistic Park or freight village and truck stop.
- Upgrade of route R555

This needs to be supported and investigated as a strategic corridor.

6.13.9 R570 Corridor

The R570 is intersecting N4 in north at Malelane gate of the Kruger National Park and in the south connecting Swaziland. The R570 is significant for cross board transport as it intersects with the N4 and the border crossing to Eswatini at the Jeppes Reef border crossing. The road belongs to SANRAL.

6.14 Public Transport Security

The safety and security of the transportation system is a fundamental issue for its users, particularly the most vulnerable populations, such as women and children. Safety and security in a multimodal transportation system should be standardised in such a way that they manifest throughout the entire travelling chain.

Public transportation systems have also seen a decline in personal attacks, as a result of reminders to keep personal belongings close to hand, walk or wait in groups rather than alone, and avoid making eye contact with strangers. This intervention is most effective in systems where the information provided includes public announcements.

In accordance with section 6.2 of this document, almost all documents and or interviews with stakeholders indicated that personal safety for public transport users is a major issue.

As a result, the following interventions are proposed for the district municipalities and the provincial authority during the ITP updates in terms of making public transport safer for commuters:

- Enforcement is required to make sure that there is a high level of compliance by members of the public who use public transportation (including NMT users), service providers/operators and authorities.
- Establish minimal requirements for provincially significant public transportation infrastructure to improve commuter safety and security.
- Establish co-operative agreements with state entities to manage and oversee safe public transportation operations, while minimizing redundancy. The province should develop a public transportation system that meets high safety and security standards. By addressing issues like enforcement, performance management, and the adoption of new standards and by-laws within Districts, this will be achieved.
- Partner with SAPS and other agencies to enhance visible policing at public transportation hubs and important corridors.
- Develop social media solutions in partnership with the private sector to enhance law enforcement and traveller safety and security.
- Providing taxi and bus drivers with training and safety knowledge. Passengers using public transportation will feel safer and more secure knowing that they are being transported by someone with the necessary experience and training.
- In the event of an emergency, providing a secure and effective emergency service is essential to guaranteeing that passengers are in capable hands. As a result, the facilities required for emergency services (such as police, fire, and medical) ought to be located close to the public transportation system.

6.15 Inter-Provincial and Cross Border Transport

The effective operation of cross-border road transport and interprovincial transport, public transportation must be encouraged by every sphere of government. Operating licenses and permits are granted for interprovincial operations by agreements made by the operating license and permit boards of the relevant provinces. Agreements between the RSA and its bordering states also govern cross-border road transport. In accordance with the Cross-Border Act and the NLTA of 2009, operators of cross-border road transport are also required to possess the necessary permissions.

The National Land Transport Act of 2009 established the National Land Transport Strategic Framework (NLTSF) 2023-2028. This framework offers guidelines on land transportation planning and delivery at the national, provincial, and local levels. The NLTSF emphasises the necessity of enabling the smooth movement of commodities and people across borders. It addresses concerns like border post capacity, freight costs, and passenger transportation choices. However, the framework identifies a transport imbalance, with a substantial preference for road transit over rail, which could hinder critical growth investments.

The necessity for thorough, consistent, and sustainable economic regulation and facilitation of cross-border road transport operations is the foundation of the most recent Cross-Border Road Transport Agency's (C-BRTA) 2021-2025 Strategy. It is designed to ensure the industry fulfils its strategic role in promoting effective international trade, regional integration, and economic growth.

By supporting regional integration and inter-trade within the Southern African Development Community (SADC), cross-border road mobility is essential to promoting and facilitating global economic activity. Road transport provides much-needed connections for landlocked nations, carrying up to 90% of passenger traffic and more than

80% of cross-border commodities. The SADC Transport Protocol and the Customs Union Agreement between Botswana, Lesotho, Namibia, Swaziland, and South Africa are examples of multilateral accords. The Lebombo border post in Komatipoort on the N4, Mpumalanga is one of the four posts that has the capacity to carry over 70% of the commercial traffic in South Africa, and is the movement between South Africa and Mozambique. The Oshoek border post is situated 160 km from Nelspruit, the facility borders South Africa and Eswatini, these border posts are crucial for the movement of goods and people. Vacations account for over 97% of all visitors to South Africa and are the main reason for travel. There are however challenges that extend to the cross-border industry which are listed below:

- Insufficient funding for infrastructure construction and maintenance leading to poor road conditions and missing links in regional transport corridors, resulting in delays, traffic congestion, long transit times, lower safety, and expensive business costs contribute to the low level of intra-African trade, estimated at 16% (Export-Import Bank of India, 2018).
- Delays at border posts, inadequate facilities (road, parking), and the frequency of law enforcement stoppages along transport corridors all pose challenges for cross-border operators, influencing the cost of doing business because of the road network and corridor design.
- Corridors connecting South Africa to the SADC region have a high level of border post utilisation. Therefore, corridor management institutions face challenges in remaining relevant to their customers.

The number of permits issued for taxi and bus operations between South Africa and its neighbouring countries has significantly increased from 2022/23 to 2023/24 according to the C-BRTA annual report 2023/24. Below is an overview of the permits issued for the border posts between South Africa, Mozambique, and Eswatini:

Table 6-3: Taxi Passenger Permit statistics

Country	Taxis 2022/23	Taxis 2023/24	% Growth	Buses 2022/23	Buses 2023/24	% Growth
Eswatini	574	982	71%	20	31	55%
Mozambique	9249	9968	8%	85	183	115%

This is an indication that the border posts need proper coordination and planning, the National Transport Master Plan (NATMAP) 2050, approved by the Cabinet in 2016, is a comprehensive and dynamic multimodal transportation policy. Its purpose is to provide an integrated, smart, and efficient transportation system that supports economic growth, promotes sustainable development, provides safe mobility options, socially integrates communities, and protects the environment.

The policy direction for the development and addressing challenges of the border posts is to:

- Implement the One-Stop Border Policy (OSBP) and improve border infrastructure and facilities to promote cross-border trade and movement.
- Align border development with regional and continental initiatives like the African Continental Free Trade Area (AfCFTA) and the Southern African Development Community (SADC) Transport, Communication, and Meteorology Protocol.
- Improve border post security and safety, while addressing issues such as illegal immigration, smuggling, and corruption.
- Encourage the use of multimodal transport corridors and streamline the integration of road, rail, sea, and air transport at border crossings.

6.16 Municipal Public Transport Strategies

The NLTA emphasizes that the municipal level of government is responsible for promoting, encouraging, and facilitating public participation and consultation in the planning, regulating, and implementing public transportation. Additionally, it is tasked with fulfilling the requirements set by the Systems Act in this area.

6.17 Ehlanzeni District Municipality

Ehlanzeni District Municipality acknowledges the necessity to support, promote, and plan for public transport within its jurisdiction (EDM DITP 2019). To rationalise and restructure public transport and to achieve a more cost-effective and efficient system, a holistic and integrated approach is necessary. As a result, they prepared and developed parameters and criteria that will allow the province to achieve a balance between public transport supply and utilisation that is both effective and efficient and responsive to customer needs when deciding on operating licence applications. Below are strategies proposed for public transport in the municipality:

Minibus Taxis

- Short-term on present taxi services and their rationalisation, is to resolve over-supply and under-supply of taxis on various routes and establishment of hitch-hiking rules. The district should also increase its Be Legal Campaign (BLG) to urge Taxi Operators to register and comply, while the province provides help by abolishing a registration moratorium.
- Medium-term, attention will be directed to the establishment of a framework for designing future service contracts, while taking into account the overall system, its modes, and operators. This would help in developing plans to incorporate taxis into subsidised and commercial contracts, formalising their activities in the district.
- Long-term plan will focus on recommendations for the types of services and operations that should be implemented. It will also create a framework for identifying appropriate routes for the taxi recapitalisation process including 35-seater vehicles, as well as for generating commercial contracts. Furthermore, this strategy will serve as a framework for planning bus rapid transit and rail operations, permitting the necessary restructuring to build a more effective and efficient system over time.

Buses

- Short-term focus will be on the rationalisation of subsidised bus services, with a focus on negotiating bus contracts, tendered bus contracts, and subsidised interim bus contracts that are set to expire.
- The medium term will concentrate on the creation of a framework for future service contract design that considers the entire system, its modes, and its operators.
- The long-term goal will be to carry out recommendations about the sorts of services and operations. This will lay the groundwork for identifying viable routes for taxi recapitalisation, particularly for 35-seater vehicles, as well as commercial contracts. Furthermore, it will serve as a foundation for planning Bus Rapid Transit and rail operations. Finally, this will make it easier to implement the necessary changes to create a more effective and efficient system over time.

6.18 Gert Sibande District Municipality

The public transport strategies for the Gert Sibande District Municipality public transport are to (GSDM DITP2013):

- The objective for public transport facilities is to combine dispersed services into a single, official hub that serves both local and long-distance passengers. The purpose of this hub is to reduce land loss from scattered facilities, while also creating a safe, well-designed environment that benefits both public transport users and the local economy.
- Conduct corridor studies to provide detailed information on the current conditions of infrastructure and future demand for transport, public transport and freight.
- Maintain and upgrade road and public transport infrastructure to improve accessibility for all users in Gert Sibande District Municipality.
- Create recommendations for public transport facilities based on passenger demand, available infrastructure, and Provincial/National recommendations.
- A proposed strategy for scholar transport is provided, which involves conducting a complete transport analysis for each institution to estimate the number and type of buses required to provide scholar transport services. Specific routes should also be identified, along with current public transit integration.
- Invest in road infrastructure to improve access to public transport, particularly in rural and remote locations, as well as for handicapped individuals, particularly those in wheelchairs and blind people, is to offer dropped kerbs at all intersections throughout an NMT network.

- Encourage proactive law enforcement at the province and local government levels to decrease unlawful activities and enhance road safety for all users. Encourage the upgrade and upkeep of public transport vehicles.
- Develop a policy and strategy to restart road user education for public and non-motorized modes of transportation, including animal-drawn vehicles. The Mpumalanga Provincial Department of Roads and Transport should lead this program and implement it across the province.

6.19 Nkangala District Municipality

The following public transport initiatives are extracted from the NDM ITP 2022-2027.

6.19.1 Rapid Public Transport Network

- Primary East-West Linkage.
 - National Routes N4 and N12.
 - Route associated with Moloto Development Corridor with Dr. J. S Moroka Local Municipality.
- Primary North South Linkage
 - R544 between Witbank and Kwamahlanga.
 - R544 between Witbank and Kriel.
 - R545 between Ogies and Kriel.

6.19.1.1 Bus and Taxi school drop-off zones.

Learners are transported by bus and taxi, and it is essential that these learners be picked up and dropped off at safe and accessible locations. Provision is required at schools to ensure that scholars arriving on foot or bicycle are not endangered and that scholars alighting and boarding at schools are not at high risk, embayments should be provided, shelters should be provided, and speed control measures should be provided.

6.19.1.2 Financial and Economic Support to Public Transport

NDM indicated that the following strategies need to be included for the promotion of public transport:

- Modal Integration strategies. Co-ordination and integration of public transport services and limiting the duplication of services.
- Subsidised bus transport strategies. Provincial subsidisation of bus transport and bus contracting.
- Taxi Transport strategy. Taxi regulation and formalisation, registration and permit conversion process.
- Rural Transport Strategy. One of high priority area for strategic development.

6.19.1.3 Public Transport Stops

A number of 370 stops are required in the district.

6.19.1.4 Public Transport ranks

The ranks in the district were assessed and most ranks lack basic infrastructure, and some ranks are in a poor condition.

6.19.1.5 RPTN Business Plan

The NDM ITP business plan indicated that the following is required to transition the existing operators into a formal public transport system as encompassed through the goals of the NLTA:

- Public Transport Industry Transition
 - VOC
 - Developing to competition to reduce costs.
 - Lessons learnt on VOC.

- Training of mini-bus taxi operators and owners of the VOC
- Public Transport Services Contracts
- Institutional structure and responsibilities
 - Responsibilities
 - Environmental needs
 - Cost and time saving needs.
 - Communication and awareness
 - Passenger needs.
 - Road traffic and corridors
 - Ticketing and fares
 - Operational requirements
- Transport Related departments that would directly or indirectly be involved
 - Planning and development
 - Infrastructure services
 - Infrastructure cluster
 - Budget and Treasury
- Oversight Company: The DITP oversight company will be responsible for:
 - Monitoring and administration of the contracts
 - Fare management and revenue collection
 - Financial administration
 - Marketing and branding
 - Maintenance and cleaning of facilities
 - Safety and security
 - Transport Planning
- Fleet and depots ownership
- Stakeholder engagement
- Funding sources
- Implementation Plan
 - Short term plan (0-3years)
 - Confirmation of demand and supply
 - Update operational plans.
 - Update business plan
 - Establishment of an intermodal planning committee
 - Preliminary designs
 - Industry engagements
 - Medium term plan (4-10 years)
 - Detailed design
 - Operational Rollout
 - Industry negotiations
 - Integrated fare management systems
 - Procurement of fleet
 - Long term plan
 - Update the designs and cost and rollout plan based on funding.

6.20 Mbombela Local Municipality Public Transport Plan

The latest public transport plan that was available at the time of the development of the PLTF 2024-2029 was the 2012 CITP. During this iteration, the MLM proposed an operational strategy with two sets of alternative plans. The recommendations for the implementation of these plans were as follows:

- Consultation and negotiation with MDOT in respect of structuring of contracts and use of subsidy.
- Formally structured consultation and negotiation processes with existing operators.
- Establishment of and consultation with user groups.
- Institutional structuring and arrangements to manage the restructuring/rationalisation processes.
- Fine-tuning of system recommendations based on development guidelines, norms and standards by DoT and more detailed information on operating cost structures which provide the basis for proper business planning.
- Development of a phased implementation programme taking into consideration current contract.

It was noted that for the proposed system to work effectively, an integrated fare structure will be necessary, and provision made for integrated ticketing systems. By implication, effective fare and subsidy revenue management systems will be essential.

As part of implementing recommendations in the refined plan, there will be a need to define and implement service contracts, by negotiation and/or tender processes. Monitoring and evaluation of service in terms of the contracts will also be essential to ensure performance requirements are met in all parts of the system. These should also be evaluated and implemented at the appropriate time. However, due to the age of the CITP it is unclear as to the current circumstances around this plan and the implementation thereof.

6.21 Strategic Public Transport Initiatives

As indicated in the challenges and deficiencies, it is evident that major challenges exist in funding and spatial planning and appropriate mode choice. The NATMAP 2050 identified interventions that can assist in the development of appropriate modal use for the estimated passengers. The strategic objectives for public transport should:

- Establish the co-ordination bodies as prescribed by the NLTA. This is to reduce the fragmented and un-coordinated delivery of passenger transport in the province by assigning the responsibilities to authorities, as foreseen in the Constitution.
- Development of a scholar transport strategy.
- Development of the rural transport strategy.
- Rationalisation of the contracted network and optimisation of the non-contracted network.
- Update the NDM IPTN plan.
- Implementation of densification plans in brownfield developments must be encouraged.
- Appropriate mode to address passenger and economic needs.
- An in-depth investigation, evaluation and economic feasibility into existing IRPTN system in Mbombela.
- Public Transport Planning guidelines must be developed that includes aligning spatial & geographical developments.
- Model integration that focuses on all aspects of integration should be investigated for each district.
- Long term financial viability and funding mechanisms for the ongoing and ever-increasing operational costs of services must be established.
- Development of a comprehensive NMT strategy and guideline document.
- The development of Universal Access guidelines.
- Support of the PRASA recovery program and alignment to the National Rail Master Plan.
- Require all ITP documents to be updated in the provincial area that are outside the minimum requirements frequency needs.
- Prioritise public transport needs to meet the demands along the strategic corridors in the province.
- Support and monitor the KPI's of the district municipalities as per the DITP required public transport projects identified per municipality.
- Reduce conflicts between modes of public transport through the rationalisation plan, safety and security strategy, NMT strategy and appropriate transport planning required in ITP space.
- Amend the subsidy policy and contracts to be in line with the National Subsidy policy.

6.22 Responsibilities

This chapter covers objectives 1,2, and 3. The above strategies and responsibilities of the chapter six are indicated below:

Table 6-4: Project and Strategy responsibilities

Project and Strategies description		Responsibilities										
		Local Municipality	District Municipality	Provincial	National Government	Qty	Budget Estimate	year 1	year 2	year 3	year 4	year 5
Scholar Transport Strategy	x	x	x	x	x	1	R4 000 000.00	R2 000 000.00	R2 000 000.00			
Special Needs Public Transport Strategy			x			1	R1 000 000.00			R1 000 000.00		
Rural Transport Strategy			x			1	R4 000 000.00		R2 000 000.00	R2 000 000.00		
Development of the Mbombela ITPN	x	x	x	x		pending						
Operating licence plan	x	x	x			4	R2 800 000.00		R1 400 000.00		R1 400 000.00	
Public Transport Plan	x	x	x			4	R3 200 000.00		R1 600 000.00	R800 000.00	R800 000.00	
Public Transport Subsidy Strategy		x	x			1	R1 000 000.00	R200 000.00	R200 000.00	R200 000.00	R200 000.00	
Moloto Corridor (Rail and Road)	x		x	x		pending						
LITP Updates	x	x				16	R19 200 000.00					
Cross-Border Transport Strategy			x	x		1	R5 000 000.00		R2 500 000.00	R2 500 000.00		
Ehlanzeni District Public Transport Plan		x				1	R2 000 000.00	R2 000 000.00				
Gert Sibande District Public Transport Plan		x				1	R2 000 000.00	R2 000 000.00				
Nkangala District RPTN Planning		x				1	R49 400 000.00	R9 880 000.00	R9 880 000.00	R9 880 000.00	R9 880 000.00	
Nkangala District Public Transport Plan		x				1	R2 000 000.00		R2 000 000.00			
Mbombela CITP	x						R8 000 000.00				R8 000 000.00	
Total							R103 600 000.00	R16 080 000.00	R21 580 000.00	R16 380 000.00	R12 280 000.00	R18 080 000.00

7 Chapter 7: Non-Motorised, Learner Transport and Environmentally Sustainable Transport Strategy

7.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the NMT Transport Strategy Chapter are defined as follows:

- a) *An indication of how non-motorised transport is provided for in the general road plan of the province, indicating-*
 - i) *The integration of Non-Motorized Transport planning with land transport and land use planning;*
 - ii) *The improvement and expansion of pedestrian sidewalks and dedicated public space to interlink public transport stations, ranks and other facilities in city areas along provincial roads;*
 - iii) *The provision of dedicated Non-Motorised Transport facilities and infrastructure along provincial roads (e.g. infrastructure for wheelchairs, pedestrian walkways, foot bridges, overhead bridges, and interchanges); and*
 - iv) *The promotion of the Shova Kalula National Bicycles, Walking and Animal Drawn Transportations strategies.*
- b) *A detailed strategy to promote and encourage the use of non-motorised transport in rural or in urban areas, if so, requested by the relevant planning authority, that must include-*
 - i) *A Non-Motorised Transport policy;*
 - ii) *A scholar transport policy;*
 - iii) *A cycling masterplan;*
 - iv) *A walking masterplan; and*
 - v) *An animal-drawn transportation plan if such transportation has significance in the province.*
- c) *An indication of measures to minimize the negative impact of transport on the environment, including, but not limited to, measures to limit fuel usage and decrease carbon footprints in line with national and international commitments to decrease greenhouse gas emissions.*

In this chapter, the reader will find the strategies, policies, and minimum requirements for NMT provision and how to integrate NMT with the surrounding land uses in the province. The projects and strategies planned in each district municipality are summarised in this chapter, including the initiatives that were listed in the 2013-2018 PLTF. Policies required to ensure safe and accessible NMT infrastructure are listed including items, such as pedestrian safety, universal access and pedestrian crossings discussed in these policies. This chapter closes with a list of projects and strategies, with specific focus on scholar transport. The various role players responsible for the development and implementation of the projects and strategies are also listed.

7.2 Background

Non-Motorised Transport (NMT) refers to modes of transport, which are either human or animal driven, such as walking, cycling, wheelchairs, horseback, usage of wheelbarrows and animal driven carts.

Historically, South Africa has not focussed on NMT, providing NMT as an afterthought or not at all. NMT is a high priority area as large portions of the population use NMT as their primary mode of transport. Many people, especially those in rural areas have no transport alternatives.

NMT is the cheapest and most sustainable mode of transport, and especially preferable over short distances. Public transport users also sometimes use NMT as a mode of transport for the first and the last legs of their journey i.e. walking from home to the public transport stop and walking from the public transport stop to their final destination.

NMT is a green and healthy mode of transport as it leaves no carbon footprint and has a healthy effect on the human body, therefore especially for short distances, the use of NMT should be encouraged and promoted.

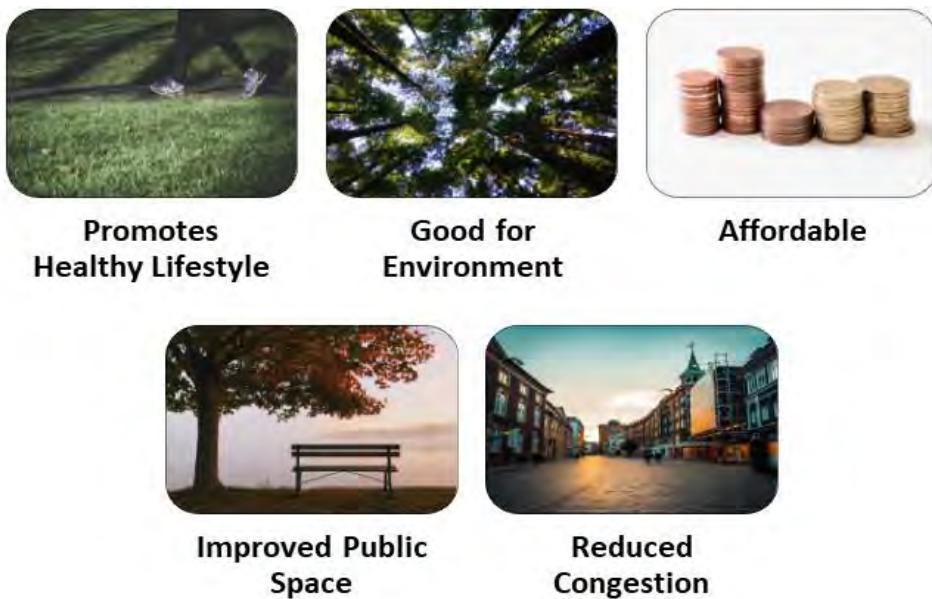


Figure 7-1: Benefits of NMT

Promotion of usage of NMT, as a mode of transport, cannot be successful unless NMT infrastructure, such as walkways, appropriate lighting, pedestrian crossings and pedestrian safety is taken into consideration and prioritised.

Universal access is closely related to NMT, as it provides for the specific needs for all NMT users (including users with special needs) to ensure accessibility and safety in terms of infrastructure.

NMT facilities provide access to food, water, education, health care and work opportunities. Growth in business, municipal, social, religious and cultural activities, is a direct consequence of improved NMT facilities and public space, as well as housing and public buildings.

NMT design must take desire lines and trip origins and destinations into consideration, to meet the true need of the users along with the proposed special development.

7.3 NMT in Mpumalanga

In accordance with the NHTS Mpumalanga Profile 2022, the main purpose of trips was for work, education, shops and religious institutions.

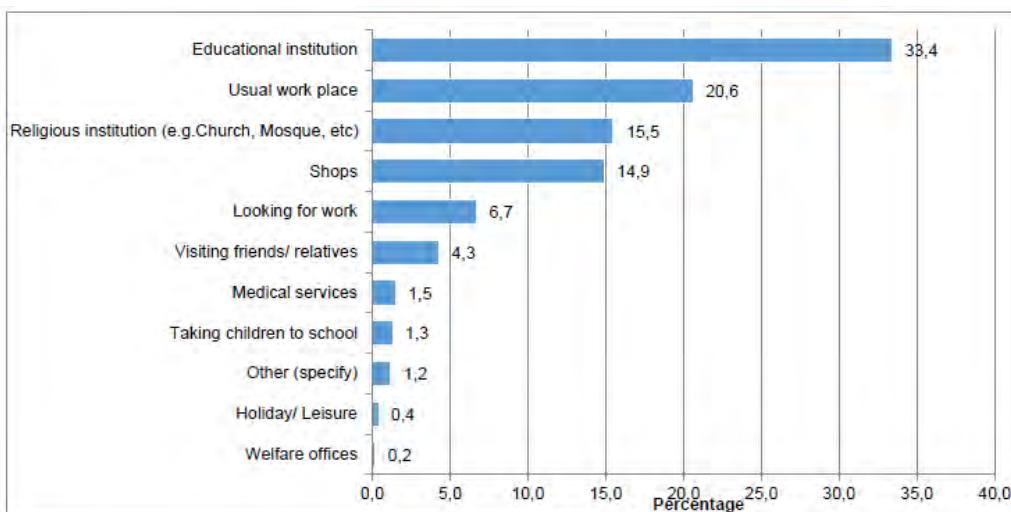


Figure 7-2: Main purpose for travelling in the seven days prior to the interview by household members, STATSSA 2020.

Of the trips undertaken, the main mode of transport was walking all the way with over 48% of the trips.

Mode of travel		Statistics (numbers in thousands)	District municipality			Mpumalanga	
			Ehlanzeni	Gert Sibande	Nkangala		
Public transport	Train	Number	*	*	*	4	
		Per cent	0,1	0,2	*	0,1	
	Bus	Number	169	55	70	294	
		Per cent	11,3	8,2	6,0	8,8	
	Taxi	Number	251	166	358	775	
		Per cent	16,8	24,9	30,5	23,2	
Private transport	Car/truck driver	Number	152	73	108	332	
		Per cent	10,1	10,9	9,2	10,0	
	Car/truck passenger	Number	100	91	81	272	
		Per cent	6,7	13,6	6,9	8,1	
Walking all the way		Number	816	279	534	1 630	
		Per cent	54,6	41,7	45,5	48,8	
Other		Number	6	*	22	32	
		Per cent	0,4	0,5	1,9	0,9	
Total		Number	1 495	668	1 174	3 338	
		Per cent	100,0	100,0	100,0	100,0	

Figure 7-3: Modal Choice per trip

Based on the above, the modes of education and work-based trips were focused on regarding modal choose.

The education statistics revealed that the main mode of transport was walking all the way with a majority of 69,4%.

Main mode of travel	Statistics (numbers in thousands)	District Municipality			Mpumalanga
		Ehlanzeni	Gert Sibande	Nkangala	
Public transport	Bus	30	39	16	85
	Number	4,9	13,1	3,6	6,3
	Taxi	72	28	84	184
	Per cent	11,6	9,5	19,0	13,5
Private transport	Car/truck driver	16	7	5	29
	Number	2,7	2,5	1,2	2,1
	Car/truck passenger	40	23	37	100
	Per cent	6,6	7,7	8,3	7,4
Walking all the way		457	198	285	941
		Per cent	74,2	66,5	64,8
Other		Number	*	*	14
		Per cent	0,1	0,8	3,1
Total		Number	617	298	440
		Per cent	100,0	100,0	100,0
					1 355
					100,0

Figure 7-4: Educational trips per mode

Moreover, the main reason for walking all the way to the educational institution by geographic location was due to public transport being expensive and that the facilities were close enough to walk.

With regards to the second highest trip purpose (work-based trips), provincially, the main mode of transport that carried the largest share of workers was car/truck as drivers followed by walking all the way to their workplace at 28,8% and 25,9% respectively. Almost one in five workers used buses (20,3%), 17,2% travelled by taxi and another 7,5% travelled by Car/truck as passengers.

The main reasons why walking and cycling all the way was opted for was based on work being close enough and public transporting being too expensive or walking by choice.

Main reasons for walking all the way	Statistics (numbers in thousands)	Geographic location		Total
		Urban	Rural	
Nearby/close enough to walk	Number	57	116	172
	Per cent	61,8	74,5	69,8
It was by choice	Number	18	13	31
	Per cent	20,1	8,1	12,5
Public transport too expensive	Number	9	20	29
	Per cent	9,8	12,7	11,6
Public transport not available	Number	*	*	*
	Per cent	1,5	0,7	*
No public transport available at specific times	Number	*	*	*
	Per cent	0,8	1,6	1,3
Public transport is not enough	Number	*	*	*
	Per cent	0,4	0,2	0,3
No transport	Number	*	*	*
	Per cent	1,2	1,4	1,4
Health reasons/exercising	Number	*	*	*
	Per cent	0,6	0,6	0,6
Other	Number	*	*	4
	Per cent	3,8	0,2	1,5
Total		91	155	247
		Per cent	100,0	100,0
				100,0

Figure 7-5: Main reasons why walking all the way was selected.

Main reasons for cycled all the way	Statistics (numbers in thousands)	Geographic location		Total
		Urban	Rural	
It was by choice	Number	*	*	*
	Per cent	83,8	24	62,3
Public transport too expensive/not available/not enough	Number	*	*	*
	Per cent	6,0	19,5	10,9
Nearby/close enough to walk	Number	*	*	*
	Per cent	*	20,1	7,2
Health reasons/exercising	Number	*	*	*
	Per cent	10,1	*	6,5
Other	Number	*	*	*
	Per cent	*	36,4	13,1
Total	Number	*	*	5
	Per cent	100,0	100,0	100,0

Figure 7-6: Main reason for cycling

Based on the above statistical conclusions, walk and cycling constitute almost 50% of the total trips taken during the survey period. Moreover, the trips are based on choice or because of the origin destination being a walkable distance. The above extracts indicate a large need for safe, sustainable, all weather, universally acceptable and appropriately connected NMT networks.

7.4 Strategies to Promote NMT

Although NMT is already widely used in Mpumalanga, there are significant improvements that are needed. To promote NMT, suitable safe NMT infrastructure should be provided. In the short term, providing safe and universally acceptable infrastructure is critical to the promotion of NMT.

Once safe NMT infrastructure is provided, walking events and alternative methods and techniques to promote NMT can be achieved.

7.5 Guiding Principles

When designing for NMT and or developments the transport and road infrastructure must consider NMT. As a result, the document specifies various levels and interventions that must be considered during the design phase.

- The planning process and its impact on NMT, for example how and when NMT is considered in the processes of road planning and design.
- Funding mechanisms.
- Education and training programmes that affect things, such as road safety and the ability of residents to use bicycles effectively.
- Design guidelines that help officials to understand and implement various aspects of project design.
- Maintenance procedures that prioritise work, as well as landscaping design.

Using the above interventions, the following guidelines were developed for the NMT framework:

Accessible

- Are there sufficient basic local facilities and services?
- Is there a functional hierarchical system of movement?
- Is there a functional NMT network?
- Does the network cater for a range of NMT needs?
- Are the key concerns of the area's residents related to speed or reliability or safety or something else?
- Is there an opportunity to combine commuter routes with leisure/ tourism routes that are scenic and include open spaces and recreation facilities?
- Is the network accessible to all, whether they have a disability or not?

Connected

- Are key destinations linked in the most direct manner to maximise connectivity/ ease of movement?
- Where are destinations, and are links adequate?
- Are pathways continuous – terminating at a logical conclusion ensuring usability?
- Where are the gaps?

Convenient

- Is the network and facilities geared to pedestrians and cyclists and appropriate for use?
- Are people prioritised?

Convivial

- Is the network attractive for users?
- Is the network safe and secure:
- Adequate lighting:
 - Overlooking from adjacent properties;
 - Appropriate boundary treatment – visual permeable walls;
 - No “dead zones” and areas for hiding;
 - Enough passing traffic to prevent overly quiet areas.
- Does the network contribute to and enhance the ecology of the local environment?

Comfortable

- Is the network comfortable for the users?
 - Does the environment include a range of spaces used by pedestrians and cyclists, including sidewalks, walkways, plazas, courtyards, squares?
 - Are there appropriate facilities en-route and at the hubs, such as a suitable microclimate?
- Is the network user friendly? Is the system designed with the end user in mind? Specifically:
 - How easy can pedestrians switch between different modes of transport?
 - Are facilities sufficient and are they appropriately located?
 - Is there convenient bicycle parking in easy to reach places close to cycle routes and destinations etc.?
 - Are road signs appropriately located?

Contextual

- Has the network got an identifiable character that reflects/ complements character attributes in the local area?
- Is the network legible and is there sufficient wayfinding along the network to help with orientation?

7.6 NMT Policy

The policies, strategies and resulting design and implementation projects should strive for improved road safety and universal access that takes into consideration the needs of special categories for passengers. This includes the need for universal accessibility for all NMT based projects. The focus of this section is to elevate the planning and provision for NMT in the Mpumalanga Province, especially for rural communities. This section outlines the national policies and legislation that promote consideration of NMT. The policies also identify NMT as a key principle to be taken into account when undertaking transport planning. The policies are as follow:

- White Paper on National Transport Policy, 1996;
- National Land Transport Strategic Framework, 2006 (NLTSF);
- Public Transport Strategy and Action Plan, 2007;
- Rural Transport Strategy for South Africa, 2007;
- Draft National Non-Motorised Transport Policy, 2008;
- National Land Transport Act 5 of 2009 (NLTA);
- The National Road Traffic Act 93 of 1996 (NRTA);
- National Road Traffic Regulations, 2000 (NRT Regulations);
- Administrative Adjudication of Road Traffic Offences Act 46 of 1998 (AARTO Act);
- National Building Regulations and Building Standards Act 103 of 1977;
- South African National Roads Agency Limited and National Roads Act 7 of 1998 (SANRAL Act) and other Roads Legislation;

- National Environmental Management Act 107 of 1998 (NEMA);
- National Heritage Resources Act 25 of 1999;
- Promotion of Administrative Justice Act 3 of 2000 (PAJA); and
- Legal Requirements for Animal-Drawn Vehicles.1998.
- The regulations supporting the National Land Transport Transition Act, no 22. Furthermore, the Road to Safety 2001-2005 strategy's mission is: "To ensure an acceptable level of quality in road traffic, with the emphasis on road safety, on the South African urban and rural road network." A key outcome required of this strategy is identified, as "We want safer pedestrians and cyclists". The Shova Kalula (Pedal Easy) Project forms part of the program to promote the safety of cyclists and pedestrians.

In response to the national directives with respect to NMT and the restructuring required within land transport planning and operations, the Mpumalanga Province is also recognising NMT.

As indicated in the national policy, the Shova Kalula is a National Department of Transport (NDOT) initiative aimed at promoting cycling as a low-cost mobility solution to low-income households, mainly to learners, farm workers and women. Its purpose is to provide sustainable and affordable mobility through the distribution of low cost or rental bicycles in a manner, which will enable the establishment of self-sustaining bicycle micro-business in the community. The programme is designed to promote cycling as an integral part of public transport, especially in rural areas.

The Department of Transport has distributed over 100 000 bicycles to learners throughout South Africa since the inception of the programme in 2001. In the next few years, the department aims to distribute 24 000 bicycles countrywide.

7.6.1 NMT and Land Use Integration

Acceptable walking distance for Urban areas generally range between 400m to 1km. Given the above, it is recommended for urban areas, pedestrian catchments with a radius of 1 km are identified, while the radius for rural areas is 2 km, which is a walk of less than 30 minutes in accessible terrain.

For cycling and other wheel based NMT modes (other than wheelchairs and wheelbarrows), a 30-minute journey corresponds with a 7.5 km catchment radius. When planning land use and transport projects, these catchment recommendations need to be accommodated.

Beyond 7.5 km, public transport services are required to enable rural inhabitants to fully participate in the South African society. However, it can be difficult to provide adequate public transport in remote rural areas, due to the large distances between towns/villages. When the distances are too far to provide adequate NMT facilities and the demand for transport is too low to warrant the provision of public transport, the provision of mobile services (minimally once per month) need to be investigated.

In Chapter 6, the development or formalisation of various public transport nodes or taxi ranks was mentioned. The above catchment rules are also required to be addressed when developing or upgrading public transport facilities.

7.6.2 District NMT Strategy and Infrastructure

NMT plans form part of the planning process for local and district municipalities ITP's. As part of the integrated transport plans, it is required to develop an NMT plan that suite the existing and future demand. The plan needs to identify NMT require infrastructure and studies that must be undertaken.

In assessing the previous PLTF and the available ITP plans from Gert Sibande DM, Ehlanzeni DM and Nkangala DM, the following infrastructure and needs were identified.

7.6.2.1 2013-2018 PLTF

The extract from the previous PLTF indicated the importance of NMT and the significant role that NMT can play in the Mpumalanga province, from feeder routes and full trips themselves.

NMT modes can be used as a collector mode. NMT modes together with public transport can play a significant role in providing a sustainable alternative to the private motor vehicle, in reducing overall carbon emissions, improving air quality, reducing congestion and moving towards meeting the targets set by the Kyoto Protocol. IMTs require supporting infrastructure for their manufacture, supply and repair, which widens employment-generating

opportunities for small enterprises and, nowhere is it more apparent than in rural areas, 2013-2018 PLTF Mpumalanga. NMT policy levers and intervention options identified in the previous PLTF are as follows:

- Focusing on and providing comprehensive NMT infrastructure and services in two corridors, namely, Moloto Development Corridor and Mbombela-Phalaborwa Corridor, as well as the University of Mpumalanga (influencing tomorrow's leaders today).
- Providing formal pedestrian and cycling lanes in engineering designs for new and existing transport infrastructure upgrades, eliminating the need for future retrofitting, which is decidedly more expensive. Providing for NMTs should be entrenched as a standard requirement for all road upgrades and new construction)
- Providing high quality pedestrian and cycle links between taxi ranks and other transport interchanges, as well as key destination points.
- Mainstreaming the Shova Kalula National Bicycle Partnership Program by increasing funding and strengthening the institutional arrangement for distribution, including spares and repairs.
- Undertaking an assessment of the NMT demonstration projects that have been implemented across the province with a view to finding innovative ways to mainstream them.
- Strengthening educational outcomes by improving scholar transport through the innovative deployment of a combination of NMTs and public transport.
- Developing NMT master plans for municipalities.

7.6.2.2 Gert Sibande DM

The Gert Sibande DM DITP section 2 indicated in the following transport objectives that relate to NMT:

Transport infrastructure:

- To maintain and develop cost effective and sustainable transportation.
- To prioritize projects in terms of sustainable economic and development needs.

Planning and Co-ordination:

To resolve possible conflicts between provincial and municipal transport and land use planning

Transport Service Provision:

- To ensure that all members of the community, that are dependent on public transport for their mobility needs, have access to an affordable and effective public transport system.
- To ensure that passenger transport services satisfy user needs, including those of commuters, pensioners, scholars, disabled, tourists and long-distance passengers.

Traffic Control and Safety:

- To enhance road traffic behaviour and pedestrian discipline through traffic safety campaigns focusing on speeding, vehicle roadworthiness, and education of scholars and reduction of road safety.
- To ensure effective road signage, road infrastructure and road furniture improvements that would assist in traffic safety and the elimination of accidents.

The DITP indicated a list of challenges facing NMT in the DM. These are as follows:

- Shova Kalula:
 - Adults intimidated learners and attempted to take the bicycles.
 - Learners with bicycles used them in an unsafe manner on busy roads/intersections and need to receive appropriate training.
 - Many older learners must accompany younger learners to school. During this stage, they give the younger learners a lift and the journey becomes unsafe.
 - School principals for this reason do not always support the Shova Kalula initiatives.
- Bicycle lanes on existing roads is not always appropriate and safe.

The DITP then indicated measures to encourage bicycles:

- The DM is a level terrain.

- The trip distances are short with maximum trip lengths of between 5-7km.
- The DM has a moderate climate.
- Identify projects at local level regarding:
 - Walkways
 - Upgrading intersections to reduce vehicle/ pedestrian conflicts.
 - Training to alert pedestrian to the dangers and rules of the roads.

The proposed projects that the municipality has identified is indicated in chapter 4. These projects constitute the NMT at schools and NMT at public transport infrastructure.

7.6.2.3 Ehlanzeni DM

The Ehlanzeni DM DITP section 2 indicated in the following transport objectives that relate to NMT:

Transport infrastructure:

- To maintain and develop cost effective and sustainable transportation infrastructure and facilities.
- To ensure that transport infrastructure provision is economically viable and requires minimum financial support.
- To provide and maintain transport infrastructure in support of the demand for passenger and goods transport.
- To provide transport infrastructure to enhance the competition of the industry and to protect people and goods in terms of safety and security, reliability and mobility.
- To encourage, promote and plan for the use of non-motorised transport, where appropriate.

Planning and Co-ordination:

the DM indicated that it would establish working groups to deal with specific aspects on policy formulation, transport planning, land use and integration, modal integration and other modes of transport.

Transport Service Provision:

- To ensure that all members of the community that are dependent on public transport for their mobility needs, have access to an affordable and effective public transport system.
- To ensure that passenger transport services satisfy user needs, including those of commuters, pensioners, scholars, disabled, tourists and long-distance passengers.

Traffic Control and Safety:

- To enhance road traffic behaviour and pedestrian discipline through traffic safety campaigns focusing on speeding, vehicle roadworthiness, and education of scholars and improvement on road safety.
- To ensure effective road signage, road infrastructure and road furniture improvements that would assist in traffic safety and the elimination of accidents.

Social and Customer-based:

To improve accessibility and mobility, limiting walking distances to less than +1 km in urban areas.

Environmental Objectives:

To ensure that public transport operations are more environmentally sensitive and sustainable and are energy efficient.

The objectives indicated above speak to affordable, sustainable, accessible, safe and universally accessible integrated transport. As part of any transport network, NMT forms a crucial step in the journey. As such, these objectives were drawn into the DM NMT strategy with the following goals.

- Reduce the cost of transport for NMT users.
- Enable the safe use of bicycles for longer distance trips.
- Reduce the number of pedestrian casualties.
- Integration of NMT and public transport.
- Promote NMT infrastructure.
- Develop pedestrian malls in the CBD areas of the district.

- Promote and facilitate non-motorised travel.

Projects

There has been 8 NMT projects that have been identified:

- Develop NMT masterplans for all four LM's at R844 000.
- Provide NMT infrastructure for all four LM's at R5 400 000.

7.6.2.4 Nkangala DM

The NDM has specific primary objectives related to integration of transport:

- To ensure coordination and integration of all public transport services in the NDM.
- To integrate the various types of transport services to provide a single and consolidated system in order to optimise and utilise the existing transport infrastructure and public transport services.
- To prepare a DITP in rural areas for the purposes of improving access to public transport services and to address the challenge of rural exclusion.

To achieve the objectives listed above, appropriately integrated, safe NMT is required.

Similarly in accordance with the NMT Transport Facility guidelines of 2014, NMT's primary objectives are too:

- Increase the role of NMT as one of the key transport modes.
- Integrate NMT as an essential element of public transport and provide NMT infrastructure.
- Allocate adequate and substantial funding for the development and promotion of NMT.

The NDM identified four areas for NMT:

1. Areas with NMT Transport Priority
2. Integration of NMT with public transport
3. NMT Nodes
4. NMT Links

Based on the above four areas above, each LM in the NDM was assessed. Translated into 84 identified NMT projects with a total of 971km of surfaced NMT and 263km of gravel at an estimated value of R1 456 500 000.

7.6.2.5 Mbombela CITP

In accordance with the Mbombela CITP 2012, it was indicated that a non-motorised transport masterplan be developed. The proposed scope of the masterplan included the following:

- A short report detailing the process followed in the investigation and evaluation of the identified needs.
- A plan indicating the status quo of NMT safety measures within Mbombela.
- A plan indicating newly recommended mitigating measures (such as sidewalks, cycle lanes, including traffic calming measures where applicable).
- Development of cost estimates for all proposed measures.
- Prioritisation of the proposed measures earmarked for implementation.

It was estimated that this plan would cost an estimated R2mil in 2012.

7.6.3 Informing NMT Policies, Strategies and Guidelines

The NMT strategy for Mpumalanga needs to be informed by national NMT policies, strategies and guidelines, while acknowledging and addressing the District and Local concerns and projects and working from the base of the 2013-2018 PLTF. This section provides a summary of the important National documents.

7.6.3.1 NMT Policy

The DoT NMT policy states that the DoT will cooperate with relevant government departments and stakeholders in developing an institutional and legal framework that responds positively to the needs and implementation of the NMT system.

The NMT policy states that the primary objectives are, amongst others, to:

- Increase the role of NMT as one of the key transport modes;
- Integrate NMT as an essential element of public transport and provide a safe NMT infrastructure; and
- Allocate adequate and sustainable funding for the development and promotion of NMT.

The document also states that non-motorised transport will be provided based on a number of principles including the need to improve the quality of life, energy conservation and safety. The policy also recognises the main components of non-motorised transport as animal-drawn transport, cycling and walking.

7.6.3.2 Scholar Transport Policy

The development of this Scholar Transport Policy (DOT, 2009) is one of the Department of Transport's interventions towards reversing challenges of accessibility and mobility. The challenges that are faced by scholars and affected stakeholders on a daily basis, include, amongst others, walking long distances to school and the safety of scholars.

The main focus of the policy is on the provision of motorised transport for scholars. The policy does make reference to walking distances to scholar travel, i.e. "a maximum walking distance to a scholar transport pick-up point (3km is considered fair)". There is also mention of scholars that have special travel needs. Moreover, reference is made to the Shova Kalula programme.

The Scholar Transport Policy (DOT, 2009) does not mention specific requirements or goals for NMT based scholar travel. *However, the DoT has recently updated its Scholar Transport Policy.*

7.6.3.3 Legal Requirements for Animal-Drawn Vehicles

National Road Traffic Regulation 187 (Legal Requirements for Animal-Drawn Vehicles) stipulates those red retroreflectors be fitted on rear of certain vehicles, and specifically provides that no person shall operate on a public road:

- a motor vehicle, other than a motorcycle without side-car or motor tricycle with one wheel at the rear;
- a rickshaw; or
- an animal-drawn vehicle

Unless these are fitted on the rear of such vehicle at the same height two red retro reflectors, one on each side, of the longitudinal centreline thereof and equidistant therefrom and otherwise complying with the provisions of these regulations: Provided that in the case of a combination of motor vehicles, both the drawing vehicle and the rearmost vehicle shall be fitted with such retroreflectors.

National Road Traffic Regulation 314, meanwhile, enumerates the following additional requirements for animal-drawn vehicles:

- No person shall operate an animal-drawn vehicle on a public road unless the name and address of the owner thereof is affixed or painted in a conspicuous position on the left side of such vehicle in letters not less than 25 millimetres high: Provided that nothing herein contained shall apply in respect of a vehicle used solely for the conveyance of persons otherwise than for hire or reward.
- No person shall operate an animal-drawn vehicle on a public road unless the vehicle and the harness and other equipment thereof are in an efficient and safe condition.
- The owner of an animal-drawn vehicle shall not cause or permit such vehicle to be used on a public road by any person who is not competent whether by reason of his or her age or otherwise to drive and control such vehicle.
- The driver of an animal-drawn vehicle on a public road shall at all times give his or her undivided attention to the driving of the vehicle under his or her control, and if the vehicle is standing on a public road, the driver shall not cease to retain control over every animal, which is still harnessed to the vehicle, unless some other person competent to do so takes charge of every such animal, or every such animal is so fastened that it cannot move from the place where it has been left.
- No person shall operate on a public road a vehicle drawn by a team of animals not controlled by reins, unless there is a person leading the team and exercising control over such team.

- The driver or other person in charge of a vehicle drawn by any animal shall not, on a public road outside an urban area, permit such vehicle to follow any other vehicle similarly drawn at a distance of less than 150 metres calculated from the foremost animal of such first-mentioned vehicle, except for the purpose of overtaking a vehicle travelling at a slower speed or when a vehicle travelling at a greater speed, having overtaken such vehicle, is drawing away from it.

7.6.3.4 Shova Kalula Programme

The Shova Kalula National Bicycle Programme was introduced as a pilot programme in 2001. Shova Kalula bicycle programme is an intervention to improve mobility and access to basic needs, as well as social and economic opportunities for people especially in rural, remote and poorly resourced areas including learners. The initial target was to distribute 1 million bicycles by 2010. The Department has distributed more than 950 000 Shova Kalula bicycles nationally. In support of the programme, several bicycle maintenance shops were established in provinces to deal with issues of maintenance and job creation/SMME development. The programme so far has had its success and challenges.

Objectives of the Shova Kalula Programme are:

- To promote cycling as a low-cost mobility solution, which would improve rural accessibility/ urban mobility to basic services including access to educational centres.
- To improve access to quality education by low cost, affordable and effective NMT services.
- To promote small business development and job creation through the establishment of maintenance systems and programme.

Targets have been set regarding the beneficiaries. These are:

- Accessibility in terms of maximum walking distance.
- Availability of public transport, within the earmarked area.
- Affordability for the households.
- Eligibility to receive free bicycles (prioritisation of rural schools, learners who walk more than 3 km to schools, but not more than 5km, youth (secondary and high schools) and farmworkers).

7.6.3.5 NMT Facility Guidelines

The NMT facility Guidelines (DOT, 2014) are a revision and update of the Pedestrian and Bicycle Facility Guidelines (DOT, 2003). The NMT Facility Guidelines define a new way of thinking about designing South African streets and roads, and re-balancing these to address safety and sustainability issues experienced daily by NMT users. These Guidelines advocate a new way of thinking, which is people (rather than vehicle) focused.

The NMT Facility Guidelines (DOT, 2014) aim to provide an easy-to-use guide for practitioners interested in cycling, walking and other NMT uses in urban and rural areas. These guidelines assist to carry out the planning, design and implementation of facilities, as well as maintenance programs for NMT infrastructure, while encouraging a consistent provision of facilities, to the best possible standards.

The NMT Facility Guidelines (DOT, 2014) include comment on spatial planning and how bad planning creates road safety risks and unsustainable settlements. It provides simple tools or that which are suitable for, among others, rural areas that lack the data to use more advanced planning tools.

The guidelines stretch the need for the establishment of the NMT demand (desire lines and volumes) and provide guidance, designs, descriptions, pictures of various best and worst NMT practices. Furthermore, the need for NMT facilities at the destinations (i.e. public transport hubs, schools, etc.) are included, as well as pavement design aspects, maintenance, and operational aspects of NMT facilities.

The document includes a special section on rural transport, as well as animal drawn transport.

7.6.3.6 Cycling Master Plan

A Bicycle Master Plan (BMP) is a document that describes long-range planning for developing bicycle infrastructure in a city/area, with emphasis on designating and expanding bike routes, fostering a safe environment for cycling, and promoting bicycling as a viable transportation option. A BMP usually details bike

routes, connecting bike lanes to create continuous, safe bicycling routes. No specific BMP is available for the province or any of its (district) municipalities.

7.6.3.7 Walking Master Plan

A Pedestrian Master Plan (PMP) is an area wide blueprint for the planning of pedestrian spaces. The goal of these plans is to establish a mobility system that will encourage and enhance alternative modes of transportation, i.e., walking. A Pedestrian Master Plan needs to identify pedestrian routes in coordination with parks, squares and other recreational areas. No specific PMP is available for the province or any of its (district) municipalities.

7.6.4 Development of Key Performance Indicators

The development and promotion of more sustainable transport through push and pull measures that endorse NMT, can only happen if Key Performance Indicators (KPIs) are identified. These KPIs should not only identify measures taken by the (district) municipality, such as the number of kilometres of pedestrian or cycling infrastructure, but also needs to include KPIs that relate to the users, such as modal splits, volumes and distances travelled, as well as user satisfaction. Refer to chapter 14 of the PLTF.

7.6.5 Data Collection and Monitoring

The tracking of KPIs requires the collection of before and after measure implementation data. The province and (district) municipalities must develop a strategy, including procedures for the collection of data. Details on the timing of NMT projects, their budgets and budget overruns should be included. Furthermore, targets should be set and monitored. Refer to chapter 14.

7.6.6 Infrastructure Implementation Programme

Road infrastructure planning and implementation is one of the key responsibilities of the province and the (district) municipalities. Traditionally, this road infrastructure development has been focused on the provision of motorised transport infrastructures. A paradigm shift to a people (not vehicle) focus is required. This requires the following:

7.6.6.1 Road implementation and maintenance programmes

In all provinces and (district) municipalities budgets are provided for the development, improvement and maintenance of the current road network. Traditionally, NMT is not considered in these programmes. Promoting sustainable transport through the promotion of NMT requires that every provincial or (district) municipality road project must include an NMT review. So called equitable road space management needs to be realised. The use of the NMT Facility Guidelines (DOT, 2014) is key in this changed process. Furthermore, the province should consider the application of labour-intensive construction and maintenance where possible.

7.6.6.2 Dedicated NMT expanded work programme.

The traditional focus on motorised transport has created a backlog in NMT facilities. This is evident with the identification of 971km of NMT infrastructure required in NDM. A dedicated NMT expansion work program is needed to address this backlog. NMT Master Plans need to be developed that guide this process as identified in all DITP documents. These NMT Plans must be developed and implemented for each (district) municipality of the province, as a part of the mobility strategy. In these plans the requirements for NMT facilities, i.e., safety (and security), comfort, directness, coherence and attractiveness need to be guaranteed. Missing links need to be identified and implementation of infrastructure needs to be prioritised, especially missing links in the rural NMT Network, such as the lack of bridges over rivers etc. Where the needs occur, infrastructure at, to and from public transport stops (interchanges), also requires priority.

Where motorised and NMT intersect, traffic calming needs to be implemented. For different types of roads, appropriate traffic calming measures vary. The NMT Facility Guidelines can be used to make informed decision on the best applications. Labour intensive construction and maintenance should be considered.

The provincial roll out of Shova Kalula should be imbedded in the various NMT Master Plans. Based on origin/destination distances (for scholars), the roll out of these programmes need to be prioritised.

7.6.6.3 Education and training

The Implementation of more sustainable road infrastructure that promotes NMT requires a paradigm shift in the thinking of municipal employees working for the Department of Transport and the Department of Public Works. Part of the education and training plan would be through the organisation of courses and seminars dealing with infrastructure management, transport planning and land-use planning for (district) municipalities.

7.6.6.4 Budget

The allocation of funding to various road projects needs to be reviewed in the light of the promotion of sustainable transport through NMT.

7.6.7 NMT Safety Plan

Given the vulnerable nature of NMT, a road safety (and security) plan need to be developed. Improved NMT infrastructure will assist combating the road safety risk for NMT. However, enforcement (for example through the issuing fines, as well as the provision of 'visible policing') is also required to endorse fight against the current road safety risk. Furthermore, education of road users, not only NMT users, but also (professional) drivers, is required. A road user educational plan is, therefore, required. Furthermore, the design principles NMT Design Principles (NMT Facility Guidelines, 2014) per road class should be adhered to as indicated in Table 7-1.

Table 7-1: NMT Design Principles (NMT Facility Guidelines, 2014)

Road Type	Motorised Transport				Conflict Risks		Non-Motorised Transport						Design Requirements	
	Speed		Volume				Desire Lines	Volume		Dimensions				
	High	Low	High	Low	High	Low	High	Low	Walkway	Cycleway				
Highway (Class 1)	Very high road safety risk	N/A	Very high road safety risk	High road safety risk	Grade separation is required	Warning signs are required	Bridges and tunnels need to be placed strategically	No mixing of NMT	Mixing of NMT possible	1500 mm - 1800 mm	1500 mm - 1800 mm			<ul style="list-style-type: none"> Barriers between MT and NMT Wheelchairs and prams passing space
Arterial (Class 2 and 3)	High road safety risk	N/A	High road safety risk	Road safety risk	Separation of cycling via kerb and road marking/colour	Separation of cycling via kerb or road marking / colour	Facilitate NMT at intersections or create crossing infrastructure	No mixing of NMT	No mixing of NMT	1500 mm - 1800 mm	1500 mm - 1800 mm			<ul style="list-style-type: none"> Partial separation of cycling via kerb or colour Appropriate drop kerbs at all crossing facilities
Distributor (Class 4)	Road safety risk	Low road safety risk	Road safety risk	Low road safety risk	Crossing facilities at attractions, such as schools and PT stops	No special infrastructure is required	Facilitate NMT at intersections or create crossing infrastructure	No mixing of NMT	No mixing of NMT	1500 mm - 1800 mm	1500 mm - 1800 mm			<ul style="list-style-type: none"> Marked separation of cycling Cycleway width can be less for short distances Appropriate drop kerbs at all crossing facilities
Access Road (Class 5)	Design speed is 40km/h		Road safety risk	Low road safety risk	No special infrastructure is required		Traffic calming might be required	No mixing of NMT	No mixing of NMT	1800mm/prefably more	N/A, cyclists in roadway			<ul style="list-style-type: none"> All UA users accommodated in the walkway Appropriate drop kerbs at intersections and traffic calming

In addition to the above guidelines, there are additional measures required to ensure pedestrian safety along the road networks.

7.6.7.1 Sidewalks

Ensure all new developments road network is designed with NMT infrastructure as per strategies and guiding principles as stated above.

- Sidewalks should be provided on both sides of all street classifications (including most residential and industrial areas);
 - Wider ($\geq 2.0\text{m}$) sidewalks should be provided along public transport routes and connections to public transport hubs;
 - Wider ($\geq 2.0\text{m}$) sidewalks should be considered for connections to schools, within activity centres and near major pedestrian generators;
 - Sidewalks should be wider ($>2.0\text{m}$) to provide separation from traffic, when:
 - Truck volumes are $> 10\%$ of total volume.
 - Design speed is $>60 \text{ km/h}$ (Does not apply to this faculty).
 - Traffic volume is $>20,000$ vehicles per day.
- Pedestrian-scaled lighting should be incorporated appropriately to the use of the street.
- Handrails and landings should be provided along steep grades.

7.6.7.2 Universal Access

Universal access (UA) in NMT relates to the ease with which all people can access transport related activities and use NMT infrastructure. To ensure ease of movement for all people, vulnerable users need to be considered. Vulnerable users include the elderly, blind people, deaf people, children, people who use wheelchairs and people with learning disabilities. Universal access principles should be included in the design of all NMT infrastructure. UA facilities proposed to improve safety of vulnerable NMT users are:

- Ensure all newly constructed walkways have pedestrian ramps and tactile paving at the street crossings;
- Upgrade all signalised intersections, where pedestrian movements are permitted, to have pedestrian ramps, audible push buttons and tactile paving at the street crossings;
- Ensure that were and when maintenance occurs for roads and or walkways that the correct pedestrian ramps and tactile paving is installed;
- Dropped kerbs and/or kerb ramps are required wherever a pedestrian or cyclist needs to cross a road. These are mainly provided for use by persons using wheelchairs, and persons pushing items, such as prams, wheelbarrows and others, but can also be useful for persons with mobility impairments. They should be provided at all road junctions, midblock crossings, medians, islands and any other locations where a kerb must be crossed, without exception;
- The ramps should be provided on all newly constructed and improved roads and streets, while programmes should be instituted to retrofit existing roads and streets with such kerb ramps / dropped kerbs. Where necessary, existing kerb ramps that do not meet requirements should also be improved. The dropped kerbs / ramps must cover the full width of the crossing, which means it must be provided so that each corner has two ramps installed perpendicular to the face of the kerb, instead of a single ramp facing diagonally into the intersection. Tactile guidance blocks should be provided at the kerb ramps, which contrasts with the colour of the rest of the sidewalk, refer to examples and typical detail below; and
- Pedestrian crossings around pedestrian precincts should be demarcated with a different surface to aid the visually impaired, and to indicate to all road users, the prominence and importance of pedestrians in those zones.

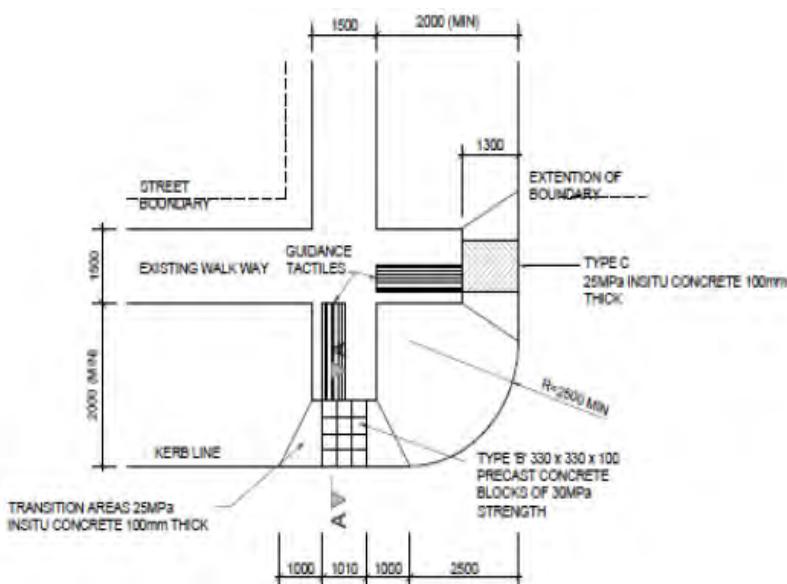


Figure 7-7: Example of UA at an intersection crossing.

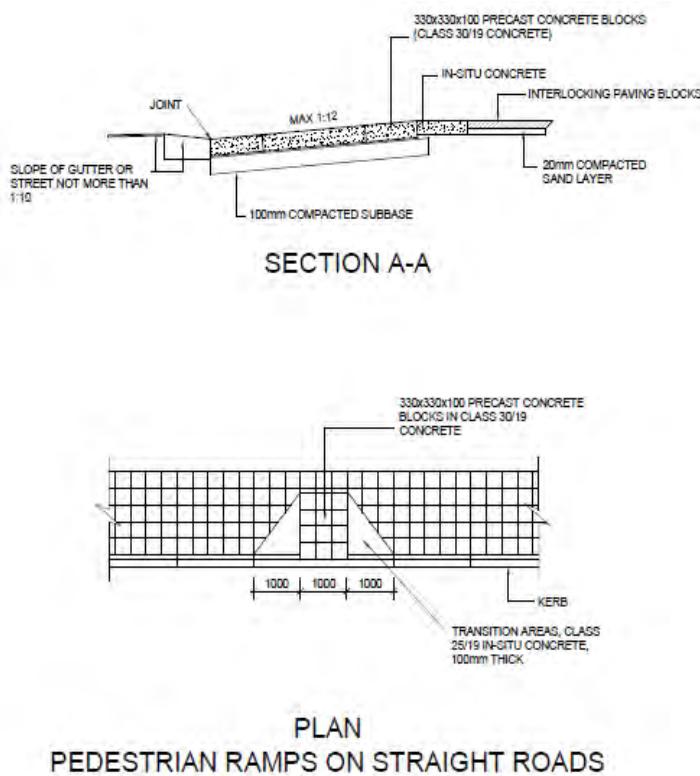


Figure 7-8: Pedestrian Ramp Standard

7.6.7.3 Pedestrian Crossings

Intersections and crossings are high risk areas for pedestrians. Safe and efficient pedestrian crossings are crucial to reduce pedestrian risk. The detailed design of pedestrian crossings should be included where relevant in all road designs and signal designs.

Pedestrian crossings should be marked. Medians should be sufficiently wide to accommodate pedestrians if applicable.

Enough pedestrian crossings should be provided. In areas with high pedestrian demand or where alternative crossings along priority routes are not sufficiently safe, a pedestrian bridge may be warranted.

7.6.7.4 Pedestrian Crossings at Intersections

The following considerations need to be considered during the design of intersection pedestrian crossings:

- Minimum crossing width of 2.4m (preferred 3m);
 - Crossing to be located a minimum distance of 1m from the stop line;
 - Crossing lanes road markings are 100mm wide, spaced 0.5m/ 1.5m; and
 - Crossing width to be 1.6m from the through traffic movement.

7.6.7.5 Mid-block Crossings:

Provided at locations to support pedestrian desire lines.

- Ensure availability of stopping sight distance;
 - Consider provision of a stop bar on multi-lane facilities;
 - Restrict parking adjacent to crosswalk;
 - Provide kerb extensions, not encroaching into cycle path;
 - Use reflective materials on kerbs;
 - Provide wheelchair ramps or at-grade channels with kerbs and medians;
 - Use zebra crosswalk markings for increased visibility;
 - Construct a speed table where appropriate;
 - Consider advance warning signs for vehicle traffic;
 - Consider kerb extensions with illumination and warning signs on vehicular approaches to increase visibility; and
 - Provide high-visibility crosswalks at locations with high pedestrian flows and/or identified as a hazardous location.

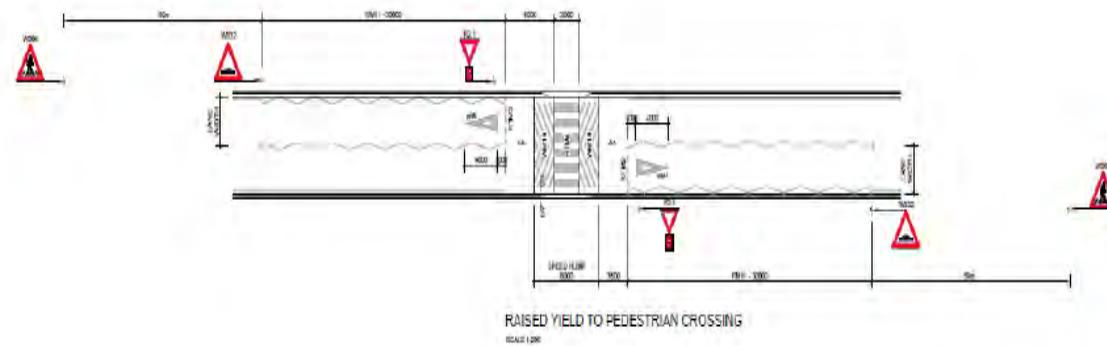


Figure 7-9: Typical Mid-block raised pedestrian crossing.

7.6.7.6 Pedestrian Refuge Island:

Provides refuge to pedestrians crossing a roadway either at an intersection or mid-block crossing, refer to Figure 7-10.

- The island should extend through the crosswalk, serving as a guide to turning vehicles and creating space for signage;
- Provide a kerb cut for wheelchair accessibility;

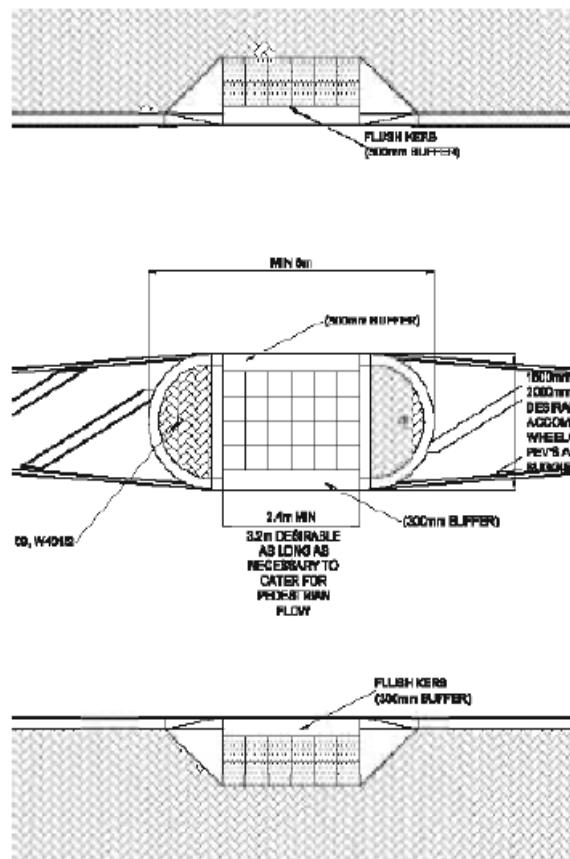


Figure 7-10: Pedestrian refuge island

7.6.7.7 Pedestrian Grade Separation:

Provided at locations with very high pedestrian volumes (such as modal transfer facilities), roads with high vehicular volumes and across freeways.

- Ramps should be universally designed and positioned to promote the use of the facility;
- Measures should be implemented to deter jaywalking, such as the provision of median barriers where applicable;
- Lighting should be provided;
- A pedestrian over-pass is preferred above the provision of a culvert; and
- The design should promote safety and security.

Table 7-2: Pedestrian grade separation specifications

Facility	Width (m)	Height (m)
Pedestrian Bridge	2.0	5.2
Pedestrian Subways		
Length (14m or less)	2.1	2.4
Length (14m to 24m)	2.4	2.4
Length more than 24m	3.0	3.0
Shared Pedestrian/ Bicycle Subways		
Pedestrian walkway	2.0	2.5
Cycle walkway	3.0	2.5

7.6.8 Scholar Safety

Scholars are one of the most vulnerable road users. Pedestrian sidewalks and raised pedestrian crossings are proposed at schools in the Mpumalanga Province to improve pedestrian safety and to minimise conflict movements between scholars and vehicles.

The following guideline should be used for scholar safety when future schools are constructed:

1. 1.5m wide sidewalks should be constructed for at least 500 m from the access to the school;
2. Sidewalks should be provided along at least one side of the road, but preferable at both sides of the road; and
3. Raised pedestrian crossings should be provided at the accesses to the schools.

7.6.9 Identify champion projects.

Champion pilot projects should be identified in each District Municipality in the province to demonstrate the implementation of NMT measures in strategically identified leader towns in the province.



Figure 7-11: NMT Projects can be constructed by labour-intensive methods.

7.7 Mitigation of Transport Impact on Environment

Transport has a negative effect on the environment. The effect comes from both construction and operations. However, mobility and economic growth is needed, and transport has a positive impact on these items. As such a

balance needs to be sort after to reduce the effect that transport has on the environment while still increasing accessibility and mobility for communities. Negative impacts from transport are such as:

- Air pollution_Carbon emissions
- Noise pollution
- Habitat destruction
- Water pollution
- Land use changes that affect water courses and animal paths
- Depletion of natural resources

The Constitution of the Republic of South Africa in Constitution Act 108 of 1996 states:

"Everyone has the right to an environment that is not harmful to their health or well-being; and to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation, and secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development."

The general consensus is that the climate change caused by global warming will result in drought and rainfall variability as well as increased average temperatures which will adversely affect the environment for future generations. Global warming is driven by the emissions of Green House Gases (GHG) caused by human activity, predominantly the use of fossil fuels. In order to ensure that the long-term effects of climate change are mitigated and managed to ensure a sustainable, non-harmful environment, the production and consumption of fossil fuels needs to be regulated in the years to come.

The transport sector is one of the biggest emitters of Green House Gases (GHG) accounting for 10.8% of emissions in South Africa with 91.2% of these from road transport. Additional indirect emissions occur from the production, refinement and transportation of fuels.

Mpumalanga province has a large mining and agricultural industry in South Africa. It is also a gateway to Mozambique and has a major freight network that operates between Gauteng and Maputo. These industries generate a large volumes of heavy vehicle trips in the province. This has a detrimental effect on the environment and as such possible strategies are required. Similarly, the province is scattered with villages and towns generating large volumes of traffic.

This section highlights environmental impact and proposes a strategy to mitigate this impact for sustainability in Mpumalanga. Relevant environmentally sustainable transport policies, studies and strategies include:

- Mpumalanga Climate Change Mitigation Strategy and Implementation Change (2022);
- Mpumalanga Green Economic Development Plan;
- Mpumalanga Air Quality Management Plan.
- Green Transport Strategy for South Africa: 2018-2050 (Department of Transport, 2018)
- South Africa National Management Act (NEMA) (Act 107 of 1998)
- National Climate Change Response White Paper (NCCRWP) (DEA, 2011)
- National Strategy for Sustainable Development and Action Plan (NSSD 1) 2011-2014

The Green Transport Strategy for South Africa: 2018-2050 highlights the relevant sections of other national policies and guidelines: for example, the labelling of new passenger cars according to fuel economy and carbon emissions, or the policies to increase the use of electric vehicles by the government and state-owned enterprises vehicle fleets. The strategy also makes recommendations of carbon taxes and other national deterrents to using fossil fuels.

7.7.1 Climate Change Mitigation

Climate change is the greatest threat to the sustainability of ecology. Its impact in Mpumalanga is noticeable in the economy, social infrastructure, ecosystem services, and biodiversity. It is largely driven by increasing temperature as the result of increased concentrations of greenhouse gas (GHG) emissions (DARDLEA, 2022).

In Summary:

- The largest contributor to GHG emissions is the stationary energy sector which amounts to 90% which excludes electricity generation supplied by the national grid.

- Transport in all its forms is responsible for 4% of GHG emissions in the province. Petrol, Diesel, and electricity are the main sources of emissions in this sector accounting for 50%, 36%, and 14% respectively.

7.7.2 Provincial Policy on Sustainable Transport

Climate change mitigation: about 90% of the energy use in Mpumalanga is generated by the burning of fossil fuels. This is not sustainable in the long term as fossil fuels are non-renewable.

Greenhouse gas from the transport sector can be minimized by promoting the shift to energy-efficient public transport and to shift rail friendly freight commodities to rail i.e. coal to the power stations.

The environmental impact of transportation is of great concern to the province and its public transport policy, and the targets set for a shift to public transport, are seen as a key mechanism to create a more sustainable transport system. DPWRT needs to focus on aspects of transport where it can be most effective changes to the province's integrated effort to mitigate climate change such as a shift from private to public transport and the modal shift of freight from road to rail.

7.7.3 Transport Sector Initiatives

Transport initiatives to reduce the impact of transport on the environment has the following strategies:

- Promoting public transport and active mobility (walking, cycling)
- Developing electric vehicles and renewable energy sources for fuel
- Improving infrastructure efficiency to reduce traffic congestion
- Mixed use integrated land use planning
- Urban planning that prioritizes pedestrian and cycling networks
- Stricter emission standards for vehicles
- Strategy for the road to rail initiatives
- Improved materials used during contraction

Based on the above the following strategies are promoted that need to be investigated in the DITP's, LITPs, Freight strategy and NMT plans.

7.7.3.1 Passenger Transport Environmental Initiatives

The primary passenger transport measures are:

- Promote the use of public transport rather than private vehicles to reduce congestion, less emissions, and improve accessibility.
- Non-motorised transport (NMT) and urban densification should be encouraged to reduce GHG emissions and to improve economic opportunities and public health from walking and cycling.
- Transition to cleaner fuels and alternative vehicles (such as electric vehicles) and provide the relevant infrastructure required to support these shifts.
- Develop a macro simulation model that can be used to optimise road-based transport to reduce green house gases as a priority.
- Constructed connected NMT infrastructure.
- Plan for integrated mixed land use planning.
- Develop a plan for micro mobility in congested metros and large cities such as Mbombela.
- Develop an intelligent transport system for Mbombela. This can assist with improving road capacity with optimised efficiencies through the ITS planning.

DPWRT will have the greatest influence in effecting the private-to-public transport shift. Moreover, the initiatives and public transport strategies are indicated in Chapter 6, while the land use and mixed-use integration is discussed in chapter 3.

7.7.3.2 Freight Transport Environmental Initiatives

1. Mining Industry Impact:

- a. Transportation of coal by road coal haulage contributes to air and noise pollution when transporting these minerals.
- 2. Hazardous waste transport
 - a. This has the potential to impact the water sources and endanger lives if not managed and planned correctly.
- 3. Board control
 - a. Major congestion at the Lebombo Boarder may be contributing to noise and air pollution.
- 4. Agricultural Industry Impact:
 - The agricultural supply chain contributes to soil degradation and water contamination from transportation of the agricultural products along the rural transport networks.

The primary freight transport mitigation measures for both rail and road are:

- A significant modal shift for freight from road to rail and provide the relevant infrastructure required to support these shifts. Resulting in a shift from petroleum-based road transport to electricity-based rail freight.
- This is currently being planned for through the NRMP and communication of the planning will cascade from the National sector to the provincial sector.
- Rail transport could alleviate the boarder congestion issues with road to rail shifts for freight transport to better service the Maputo port.
- Commodities in agriculture such as citrus fruit could be transport on rail to the ports.
- Partnership with Mining and Agricultural sectors to develop environmentally sustainable transport solutions.

DPWRT will have the greatest influence in effecting the modal shift from road to rail this is incorporated as a key objective in Chapter 9.

7.8 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 7-3: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Provide NMT Infrastructure	x	x	x	
Provision of Sidewalks	x	x		
Provision of UA facilities	x	x		
Provision of Pedestrian crossings	x	x		
Develop NMT Plan / Strategy		x	x	
Gert Sibande DM Transport Infrastructure			x	
Gert Sibande DM Planning & Co-ordination			x	
Gert Sibande DM Transport Service Provision			x	
Gert Sibande DM Traffic Control & Safety			x	
Ehlanzeni DM Transport Infrastructure		x		
Ehlanzeni DM Planning & Co-coordination		x		
Ehlanzeni DM Transport Service Provision		x		
Ehlanzeni DM Traffic Control & Safety		x		
Ehlanzeni DM Social & Customer-based		x		
Ehlanzeni DM Environmental objectives		x		
8 NMT Projects for local municipalities in Ehlanzeni DM	x			
Nkangala DM Transport Integration	x	x		
Mbombela CITP NMT Transport Masterplan	x			

Development of Key Performance Indicators		x	x	
Data Collection and Monitoring		x	x	
Infrastructure Implementation Programme		x	x	
Road Implementation and Maintenance Programmes		x	x	
Dedicated NMT Expanded Work Program		x	x	
Education & training		x	x	
NMT Safety Plan	x	x	x	
NMT Provision for Scholar Safety	x	x		
Walking Mater Plan		x		
Cycling Master Plan		x		
Environmentally Sustainable Transport	x	x	x	x

This chapter covers objectives 1,2,3 and 4.

8 Chapter 8: Transport Infrastructure Strategy

8.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Transport Infrastructure Strategy Chapter are defined as follows:

- a) *A list of major planned provincial infrastructure and facility development initiatives, and transport priorities and projects regarding infrastructure, including roads, railway lines and major intermodal facilities.*
- b) *A summary of strategies of planning authorities and major initiatives of provincial significance regarding infrastructure, highlighting those taken from Integrated Transport plans where applicable.*

The purpose of this chapter is to provide an overview of the strategies implemented by planning authorities and to highlight key provincial initiatives related to infrastructure. It includes a summary of significant planned infrastructure and facility developments, as well as transportation priorities and projects, encompassing roads, railway lines, and major intermodal facilities. Strategies and KPI's, based on the Road Asset Management System (RAMS) are provided to assist with the monitoring and performance of the road networks.

The road network forms a crucial foundation for maintaining infrastructure in Mpumalanga Province, playing a key role in supporting economic and social development. The Mpumalanga Department of Public Works, Roads, and Transport (DPWRT) faces the ongoing challenge of balancing competing priorities within a limited budget, which falls short of providing the desired levels of service.

The Mpumalanga Provincial Government owns the road infrastructure in the province, while the Mpumalanga Department of Public Works, Roads, and Transport serves as its custodian.

8.2 Planning Authority Strategies and Initiatives

The vision of the Mpumalanga Department of Public Works Roads and Transport is articulated as follows: *"An integrated transport system and infrastructure that promotes socio-economic development"* This Provincial vision must be cascaded down to the various District Municipalities within the Province. Each District Municipality's transport vision is incorporated into its respective Integrated Development Plan.

The Department relies heavily on the Road Asset Management System (RAMS) to assess the condition of both paved and unpaved roads in the province. Recently, the system has also enabled predictive capabilities, making it highly valuable for planning purposes. Trained and competent staff conduct visual inspections, assigning indices that reflect the condition of the inspected road sections. The average Visual Condition Index (VCI) for all provincial paved roads in Mpumalanga, based on provisional 2023 data, stands at 55%, which classifies the roads as being in a "fair" condition.

Preliminary designs prepared by professional consultants, which include public consultations, are reviewed by a panel of experienced road engineers. A political, economic, social, technological, legal, and environmental (PESTLE) analysis is conducted, determining whether the proposed road project will advance to the next stage. If approved, the process moves forward with the submission of a final design. In recent years, economic factors, particularly budgetary constraints, have been the most significant obstacle to the completion of many projects.

8.2.1 Planned Provincial Infrastructure and Facility Development Initiatives

These initiatives listed below are part of Mpumalanga's strategic focus to improve road infrastructure to support economic activities, reduce unemployment, and provide better public services across the province:

8.2.1.1 Coal Haul Road Rehabilitation Programme (CHRRP):

The CHRRP is aimed at monitoring and implementing rehabilitation works on coal haul routes. These roads are essential for transporting coal from mines to power stations, which play a significant role in energy production for the region and the country. The programme is critical because the coal supply relies on these roads, and disruptions or poor conditions could affect the power supply.

8.2.1.2 Upgrade and Rehabilitation Projects:

The RI-AMP outlines various rehabilitation and upgrade projects aimed at restoring or improving existing roads that are either deteriorating or no longer meet the desired performance standards. This includes maintenance projects focused on upgrading road surfaces, addressing congestion, and improving safety features.

8.2.1.3 Expanded Public Works Programme EPWP:

EPWP is designed to alleviate unemployment by creating labour-intensive public works projects. In the context of road infrastructure, EPWP focuses on maintaining and rehabilitating roads, while providing job opportunities to the local communities. This programme is highlighted for its dual objective of infrastructure development and poverty alleviation. Refer to section 8.2.6.

8.2.1.4 Road Infrastructure Development

This refers to the ongoing efforts to expand and improve the province's road network, including the development of new roads, rehabilitation of existing ones, and routine maintenance. This initiative aims to support economic growth by providing better road connectivity, especially for industries like tourism, agriculture, and mining.

8.2.1.5 Bridge Construction and Maintenance:

The RI-AMP also highlights the importance of maintaining and constructing bridges as part of the overall road infrastructure. Bridges are critical for connectivity, and their maintenance is part of ensuring a reliable and safe road network across Mpumalanga. Projects under this initiative will likely focus on high-priority bridges that are integral to the transport network.

8.2.1.6 Integrated Rural Mobility and Access (IRMA):

IRMA is focused on improving rural access to essential services and markets through better mobility solutions. This programme specifically targets rural areas that are often underserved by formal road networks, aiming to create more accessible, durable roads and mobility options for rural populations, thus contributing to socio-economic development.

8.2.2 Strategies and Major Initiatives of Provincial Significance

8.2.2.1 Integrated Transport Plans

- **Alignment with ITPs:** The RI-AMP underscores the need to synchronize road development with Integrated Transport Plans (ITPs) to ensure that infrastructure projects are prioritized effectively. This approach helps guide decisions on infrastructure investments across major transport corridors.
- **Enhanced Connectivity:** The document emphasizes the maintenance and improvement of mobility roads and access routes. These transport corridors play a vital role in enhancing economic connectivity within and outside the province, particularly in rural areas.

To enhance planning, all necessary information should be readily available, minimizing reliance on assumptions. Thus, systems that support status analysis and prompt intervention should be regularly updated by qualified personnel.

The action plans described in various places in this Plan will rectify this issue as summarised below:

- Optimal utilisation of RAMS.
- Implementation of a comprehensive Maintenance Management System.
- Improvement in the Departmental capacity in terms of manpower and competencies.
- The department needs to advance its procedures on:
 - Needs determination: demography, economic development, transport and travel patterns and trends, user costs, in-depth knowledge of IDPs, etc.
 - Supply side (current infrastructure): Accurate inventories, current condition, condition trends, road utilisation, road classification and categorisation, etc.

8.2.2.2 Performance measures

The condition and performance of the network, as measured and reported in the Road Infrastructure Asset Management Plan, will continue to be used to monitor the effectiveness of the Plan, as has been done in the past. The key performance indicators are:

- The rate of increase in the average network as determined by the VCI for paved roads from the level of 50% (TMH 9).
- The rate of increase in reseal condition index (RCI) for paved roads from the current level of more than 60% (TMH 9).
- The rate of increase in average Visual Gravel Index (VGI), (gravel quantity, gravel quality, riding quality and drainage) from the current condition of 33% (TMH 12).
- The average road user cost decreased from the current level of R10.85 (inflation not considered).
- The relation between planned, projected, and actual targets achieved in terms of output.
- The relation between planned, projected, and actual targets achieved in terms of expenditure.
- No. of projects completed on time, within budget and scope.

8.2.2.3 Improvement programme

The Department of Infrastructure plans to implement the following proactive measures to address the apparent weaknesses in their plans:

- Optimally utilise the RAMS.
- Implement a comprehensive Maintenance Management System.
- Address and thus improve the Departmental capacity regarding manpower and competencies. This may take time to realise owing to the prevalence of constraints (notably of funding) which are beyond the Department's control and,
- Advance its procedures on:
 - Needs determination: demography, economic development, transport and travel patterns and trends, user costs, in-depth knowledge of IDPs, etc.
 - Supply side (current infrastructure): Accurate inventories, current condition, condition trends, road utilisation, road classification and categorisation, etc.
- Implement and participate in the National KPI programme to establish and manage a set of KPIs for the DPWRT that will enhance its ability to meet road user demands.

8.2.2.4 Monitoring and review procedures and reporting

Road condition information will be updated annually. The network's performance, as measured by visual condition indices, will be used to monitor the effectiveness of the Plan and its outputs.

In addition, the following actions will also be undertaken:

- Monthly, quarterly and annual progress reports in terms of programme implementation progress and outputs achieved against planned targets shall be produced.
- Quarterly, mid-year and annual reviews of Department performance.
- Annual performance audits by Departmental internal audit.
- External audits as per requirements or circumstances shall be carried out.

The audit process will focus on the planning procedures and the outcomes achieved. This will determine the feasibility and effectiveness of the plan by revealing whether the Department has met its intended goals.

8.3 Provincial Road Network Strategy

The Department of Public Works, Roads, and Transport (DPWRT) of the Mpumalanga Provincial Government is responsible for managing the provincial road infrastructure network. This network connects various areas within the province, as well as linking the province to other provinces, neighbouring nations, and municipal regions. The provincial road network is a crucial economic asset, not only for Mpumalanga, but also for neighbouring provinces and countries and requires careful management. Recognising the importance of effective road asset management, the DPWRT has implemented an advanced Road Asset Management System (RAMS), which provides critical data for the management and planning of the road network.

The 2023 analysis shows that the overall condition of both coal and non-coal paved provincial roads in Mpumalanga, categorised as "fair," has reached a 55% Visual Condition Index (VCI), meeting the minimum Condition Index (CI) requirement outlined in TMH 22. However, the condition of these paved roads still falls short of global standards and the recommendations from RISFSA, which suggest that having a significant portion of roads in a "poor to very poor" condition is deemed "acceptable." Currently, about 33% of paved roads are classified as "fair," indicating the need for preventative maintenance to extend their service life. The overall condition of the unpaved provincial road network, including both coal and non-coal routes, is rated as "poor," with 34% of these roads operating in poor condition.

8.3.1 Asset Management

8.3.1.1 RAMS

A compliant Road Asset Management System (RAMS) has been implemented from 2008. The latest information was obtained in the 2024/2025 RI-RAMS which used 2019 information. The document indicated that an update for RAMS was in the process to be updated. The RAMS is to include the following scope of works:

- Road Network Identification (RNI)
 - Identification of all Provincial roads with attributes like length, width, pavement type, surface type, etc.
- Pavement Management System (PMS)
 - Condition assessments
 - Visual condition assessment (TMH 9 and TMH 12)
 - Roughness, rutting and surface.
- Traffic Count Management System (TrMS)
- Bridge Management System (BMS)
- Geographical Information System (GIS)
 - All information is fully converted into a spatial database (PostgreSQL)
 - Maps and other spatial representations are produced from the GIS and can be plotted or be made available to the public in the web portal.
 - Web Portal - www.mp-rams-co.za. The Web Portal is intended as a public view of selected inventory and condition information, as well as offering officials additional views.
 - Freely accessible
- Annual analysis and optimisation process to propose treatments for implementation.
- Related support services

8.3.1.2 Routine Maintenance Plan / Light Rehabilitation

The Department continues with its ongoing routine maintenance activities aimed at preserving safe driving conditions and integrity of its network. Though the growing need and demand for routine maintenance still supersedes the available resources at the department's disposal, preference is given to prioritized routes in dire need of urgent and immediate attention. Attempts to strike a balance between emergency and planned responses are carefully managed without compromising one for the other.

To prioritise, the DPWRT have identified a proposed basis for calculating the routine maintenance needs. This is detailed in the RI-RAMS 2024/2025 report. The above then is translated into a basis for allocating the route maintenance budget. Two approaches are used, one for Routine Maintenance and one for projects (rehabilitation and reseal). The process is described below:

1. The portion of the total programme budget allocated to Routine Maintenance is determined. This amount is then used as a basis for allocation to cost centres and activities.
2. The allocation is then split between the various activities, based on a few factors like stated needs from cost centres and regions, evaluation of historic needs and expenditure and best practice maintenance management. This process yields a budget amount for each activity, for the whole province.
3. The allocation to each cost centre is done through a set of algorithms, which utilises statistics of various features in the RAMS to calculate the budget allocation to each cost centre, for each activity.
 - a. The RAMS features used above include road length, road condition, traffic (both vehicles and passengers), road classification, number of intersections and some more specifics, like cracks and shoulder conditions.

8.3.1.3 Rehabilitation Plan

The rehabilitation plan is based on the outcomes of the annual RAMS analysis and optimisation. The processes and systems are to enable proper maintenance planning and improve productivity. The flowing process and systems have been put in place to prioritise, optimise and improve performance and productivity as per the RI-RAMS 2024/2025:

- 1) Outsourcing of works to supplement resource shortage – currently there is a chronic shortage of technically skilled personnel, and the shortage is hampering on efficiency.
- 2) Developing and refining of a contractor development model with focus on capacity building and mentorship of small and emerging contractors shall be intensified. Refer to section 8.2.6.
- 3) Procuring plant and equipment hire contractors to be pursued with vigour.
- 4) Maximizing on the capacity and fully engaging in-house teams prior to outsourcing.
- 5) Refining and developing of policy documents and procedure manuals required to guide maintenance operations (eg. such as pothole patching, fencing, firebreak policies, etc.) and related procedure manuals.
- 6) Developing of maintenance management system (MMS) – The process involves an all-inclusive approach to cover the following:
 - a. Maintenance principles, procedures, activities, work execution procedures and methodology and norms and standards;
 - b. planning, estimation and budgeting for maintenance;
 - c. monitoring, quality control and measurement;
 - d. a comprehensive costing and reporting system;
 - e. resource management principles for plant, materials and services;
 - f. Supporting procedures for administration, term contract management, and
 - g. comprehensive training and capacity building to all relevant staff, from operational to Head Office level.
- 7) Procuring of service providers for maintenance related services – in consonance with the department's contractor development model, the following service providers will be procured as part of the broader objectives:
 - a. Material and plant suppliers
 - b. Reseal and patchwork term contractors
 - c. General maintenance term contractors
 - d. Training and mentorship consultants
 - e. Professional consulting services
- 8) Formulating of maintenance steering committees at each district level with the involvement of Head Office.
- 9) Mechanized approach towards pothole patching is currently being explored to decrease production time.
- 10) Siyatentela
 - a. The Siyatentela programme is still ongoing.
 - b. Upscaling of the programme is being considered with the view to increase the number of workdays per week.
 - c. There is a need to improve on quality control.
 - d. Effective performance reporting is required in order to allow for proper programme evaluation.
 - e. The regional maintenance contracts incorporate many EPWP and related capacity building and employment elements, which should be monitored for compliance.
- 11) Tenders and Procurement
 - a. Pro forma tender documents need to be refined and updated to contain the principles and concept of the new contractor development model and S'Hamba Sonke.
 - b. A procurement schedule showing all running routine maintenance contracts, commencement dates and expiry dates should be formulated and constantly managed to guide procurement planning. This shall form part of a broader tender management system.

8.3.2 Current Status of the Road Network

The road network analysed in this chapter is based on RI-RAMS report 2019. The report provides the requirements for both coal haul roads and non-coal haul roads.

According to the Road Infrastructure Asset Management manual, the provincial road network consists of a total of 13 837 kilometres, with 5 474 kilometres (40%) of the roads being paved and 8 363 kilometres (60%) being unpaved. The majority of provincial unpaved roads fall under Class 4, which are classified as district collectors. In contrast, the majority of provincial paved roads are almost evenly distributed across Classes 2, 3, and 4.

8.3.3 Coal Haul Usage

Approximately 27% (1 560 km) of the paved provincial road network is utilised by coal haul trucks, forming what is known as Coal Haulage roads. Additionally, 3% (240 km) of the unpaved roads are also classified as coal haulage roads.

8.3.4 Tourism Routes

Tourism routes account for 9% of the total provincial road network. Of these, 8% of all non-coal haul roads and 13% of all coal haul roads are designated as tourism routes. The distribution split between coal and non-coal haul tourism roads is 22:78 for provincial paved tourism roads and 1:99 for provincial unpaved tourism roads. The tourism road network within the province includes both coal haul and non-coal haul routes. For paved roads, 825 kilometres are used for non-coal haul tourism (78%), while 236 kilometres are used for coal haul tourism (22%). In the unpaved road category, 137 kilometres (99%) are designated for non-coal haul tourism, with just 1 kilometre (1%) used for coal haul tourism. Overall, non-coal haul tourism routes account for 80% (962 km), while coal haul tourism routes make up 20% (237 km).

The provincial road network that receives subsidies is divided between non-coal haul and coal haul usage. For paved roads, 442 kilometres (87%) are allocated to non-coal haul routes, while 67 kilometres (13%) are used by coal haul routes. In the unpaved road category, 228 kilometres (99.5%) receive subsidies for non-coal haul usage, with only 1 kilometre (0.5%) designated for coal haul usage. Overall, 91% (669 kilometres) of the subsidised roads are for non-coal haul use, and 9% (68 kilometres) are for coal haul routes.

8.3.5 Rail Infrastructure

There are number of important rail corridors that cross the Mpumalanga Province, as detailed in the Draft National Rail Master Plan and defined below:

8.3.5.1 North Corridor

The North Rail Corridor, a critical component of South Africa's transport network, stretches from Lephalale in Limpopo Province to Richards Bay in KwaZulu-Natal. This corridor plays a pivotal role in the transportation of coal and other minerals, significantly contributing to the country's economy and energy sector. Coal is fed into the heavy haul coal line from several feeder lines, including Welgedag – Ogies, Emalahleni – Blackhill, Wonderfontein – Geluksplassaas, and Machadodorp – Ermelo. This chapter explores the historical development, characteristics, and importance of the North Rail Corridor.

The North Rail Corridor is distinguished by several important characteristics that highlight its significance within South Africa's transport framework:

- Line Classification: As primarily a heavy-haul rail line, the corridor is designed specifically for the transportation of bulk commodities, with coal being the predominant freight. This classification underscores its strategic importance in supporting the mining sector.
- Track Gauge: The corridor operates on a narrow gauge (Cape gauge) of 1,065 mm, which is typical for South African railways. This gauge enables interoperability with other lines in the network, facilitating seamless freight movement.
- Traction Systems: The corridor employs both electric and diesel traction systems, which are crucial for heavy-haul operations. These systems enable the transport of large volumes of coal efficiently, contributing to the corridor's overall effectiveness.
- Axle Load Capacity: Designed to accommodate high axle loads, the line typically supports loads ranging from 20 to 26 tons axle loads. This capacity is essential for heavy coal trains, allowing for the transportation of substantial quantities of freight.
- Train Control and Signalling: Modern train control systems and signalling technologies are implemented along the corridor to enhance safety and operational efficiency. These advancements allow for increased train frequencies and reduced transit times, optimising the movement of goods.

- Environmental Considerations: The corridor's operations are subject to environmental regulations due to the ecological sensitivity of the areas it traverses, particularly in relation to water resources. Compliance with these regulations is critical to minimising the environmental impact of rail operations.
- Economic Impact: The North Corridor is a cornerstone of the South African economy, enabling the export of coal to international markets. Its operation significantly contributes to the country's GDP and fosters job creation in the mining and transport sectors.

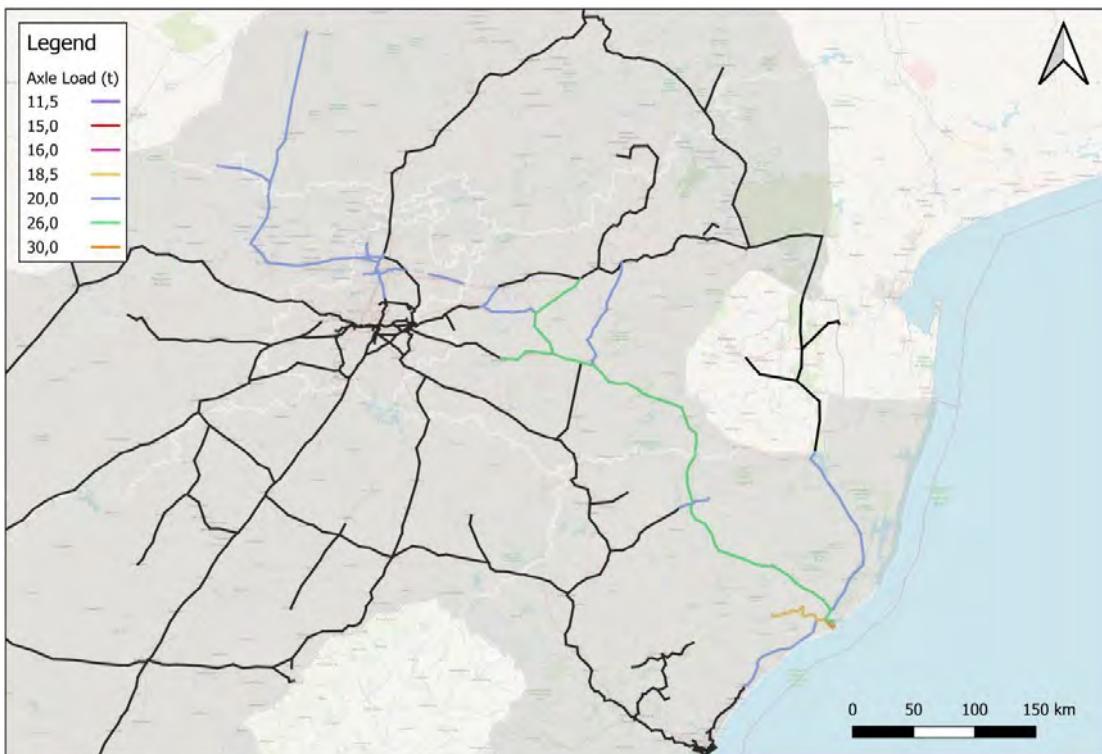


Figure 8-1: Axle Loads on the Northern Corridor

8.3.5.2 Northeast Corridor

The Northeast Corridor is a vital part of South Africa's rail system, connecting major industrial areas, agricultural regions, and mining zones in the northern and eastern parts of the country. This corridor includes several critical lines that have supported the movement of goods and passengers for over a century. The section from Phalaborwa/Hoedspruit to Kaapmuiden operates as a permanent diesel line, facilitating key traffic flows, including magnetite and rock phosphate transported through Eswatini en route to Richards Bay. The Steelpoort line is crucial for chrome ore exports from the eastern limb of the Bushveld Igneous Complex. Greenview to Komatipoort, train lengths are limited to just over 50 wagons due to the sharp curves and steep gradients around Waterval Boven and Waterval Onder. The corridor also faces challenging 1:50 gradients along its entire stretch from Greenview (outside Pretoria) to Komatipoort, impacting operational efficiency.

Groenbult/Phalaborwa to Kaapmuiden

The Groenbult to Kaapmuiden line primarily supports the mining and agricultural sectors, linking the mining region of Phalaborwa to Kaapmuiden. The line was constructed to move bulk minerals, including copper and phosphate from the Phalaborwa mining complex, as well as magnetite for export and local industries. It also plays an important role in supporting agricultural transport, particularly the movement of crops like sugarcane and citrus from the fertile Lowveld.

Key Characteristics:

- Line classification: single freight-dominated line.

- Track gauge: Cape gauge 1 065 mm.
- Traction: Diesel from Groenbult to Hoedspruit, electrical from Hoedspruit to Kaapmuiden
- Axle load: 18-20 tons.
- Train control system: TWS from Groenbult to Hoedspruit and CTC from Hoedspruit to Kaapmuiden.

Greenview to Komatipoort

The Greenview to Komatipoort line links Gauteng (via Pretoria) to the eastern border town of Komatipoort. This line serves as a critical freight artery, handling agricultural products, industrial goods, and mineral shipments also for exports through Maputo Port.

Key Characteristics:

- Line classification: Mixed-use (freight and passenger).
- Track gauge: Cape gauge 1,065 mm.
- Traction: Majority electrified
- Axle load: Up to 20 tons.
- Train control system: Before vandalism the entire line was fully signaled, controlled from several consecutive CTCs.

Komatipoort to Eswatini

The line between Komatipoort and Eswatini forms a strategic rail link that enhances connectivity between South Africa and its landlocked neighbour. Historically, this line has been vital for moving goods between the two countries, including coal, timber, and other bulk commodities. The Eswatini route helps ease congestion on other rail lines within South Africa while providing direct access for freight moving between the north-eastern provinces and Eswatini's key economic centres. Its historical importance is tied to regional cooperation and the efficient movement of goods.

Key Characteristics:

- Line classification: Single Freight-dominated (coal, timber, and bulk goods).
- Track gauge: Cape gauge 1 065 mm.
- Traction: Diesel
- Axle load: Up to 20 tons in certain heavy-freight sections.
- Train control system: TW

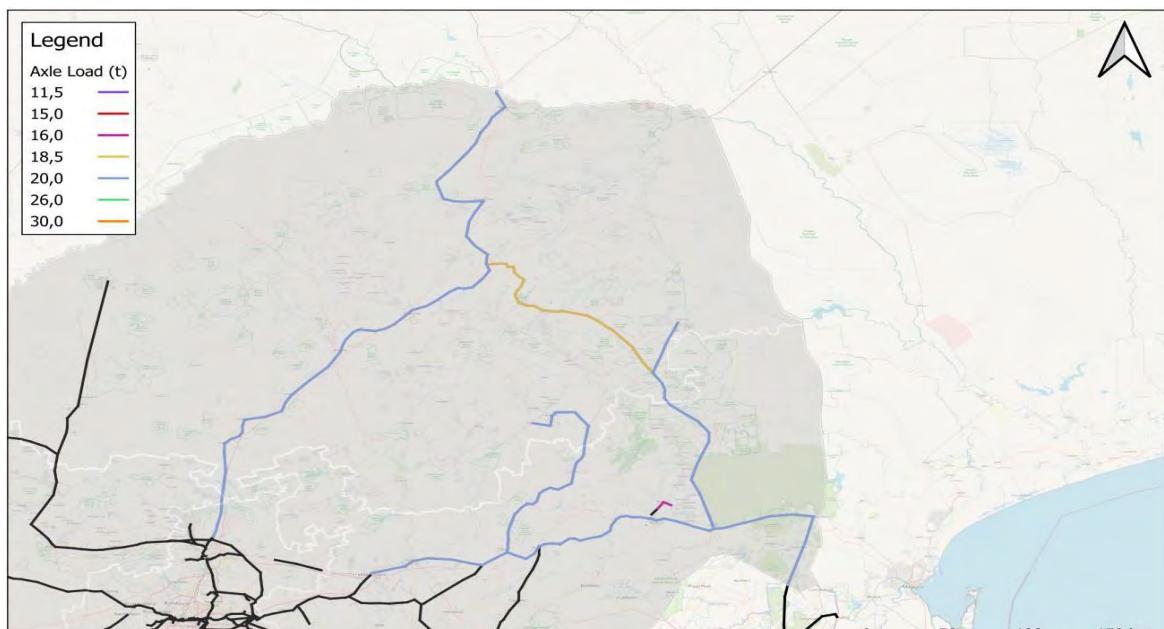


Figure 8-2: Axle Loads on the North-Eastern Corridor.

8.3.5.3 Container Corridor

This corridor plays a central role in the movement of freight between the coast and the inland regions, underpinning South Africa's trade and logistics network. It starts in Gauteng, then a section is situated in Mpumalanga and ends in KwaZulu-Natal. Over the years, it has evolved into one of the most significant freight corridors in sub-Saharan Africa, facilitating the movement of bulk commodities and containerised goods, both for domestic consumption and international export.

- Route and Geography:
 - Passes through coastal plains, mountainous regions, and highveld plateaus, including the Drakensberg Mountains.
- Gauge and Track Type:
 - Cape gauge 1 065 mm.
 - Combination of single and double tracks to optimise capacity.
- Electrification:
 - Electrified at 3 kV DC.
 - Potential for future electrification upgrades.
- Capacity and Traffic:
 - Primarily carries containerised freight, along with automotive parts, chemicals, and agricultural goods.
- Train Control and Signaling:
 - Colour light signaling controlled from CTCs.
- Traction and Rolling Stock:
 - Mix of electric and diesel locomotives.

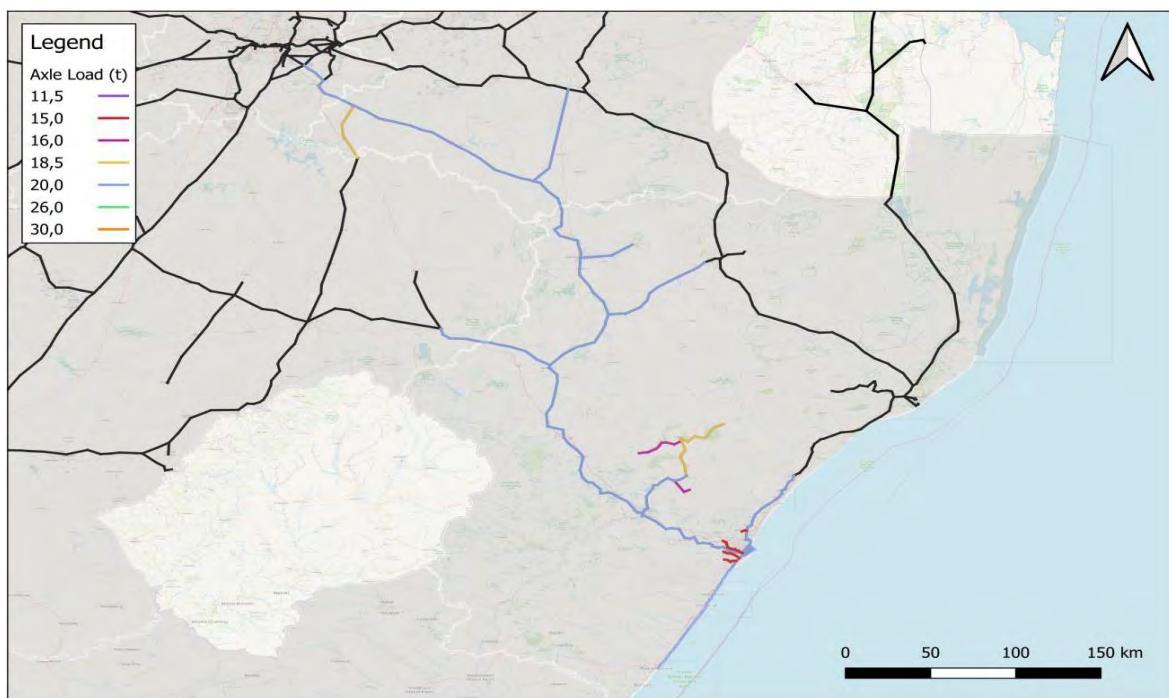


Figure 8-3: Axle loads on the Container Corridor.

8.3.6 Skills Development and Job Creation

8.3.6.1 Work Opportunities as per the RI-RAMS

As per the Road Infrastructure Asset Management Plan (PI-RAMS) 2024/2025 for the projects 2024-2026 there is a focus on the Expanded Public Works Program (EPWP) with the strategy to focus on:

- Number of Opportunities
- Training
 - Formal and Informal
- Focus on initiatives such as the Siyatentela program, Integrated Rural Mobility Access (IRMA) etc. to ensure sustainability in work opportunity creation.

The RI-RAMS 2024/2025 further assessed that:

- Labour-Intensive Construction (LIC) must be promoted in larger projects in order to maximise the number of work opportunities created. Priority must be on projects that have lower traffic counts per day and narrower widths;
- Improvement must be made on Intra/Inter departmental communication and coordination, as well as with municipalities in the province;
- The department must prioritise utilisation of long-term Routine Road Maintenance (RRM) contracts in order to increase the yield of work opportunities. This will also ensure a sustainable system of opportunity creation.

From the above the RI-RAMS 2024/2025 adopted the following approach to then increase work opportunities:

- Inclusion of specific provisions for EPWP in the contract documentation;
- Designs that promote more LIC as far as its practical;
- Consider lengthening RRM contracts duration, to ensure that there is sufficient opportunity to achieve an increase in labour output numbers;
- A renewed effort is considered, in particular on maintenance projects, i.e. Siyatentela programs, and other special programmes such as IRMA projects to increase the work opportunities yield;
- Train officials on the methodology of labour-intensive construction. A refinement of PRMG requirements, identification and prioritisation of projects based on the Shamba Sonke programme Pillars, i.e. labour intensive construction, access, asset management, safe roads and increased investment will be required.

It is estimated that 11 065 work opportunities will be created in 2024/25 financial year. These work opportunities were broken down to the following targeted groups:

- Women_ 6 639
- Youth_ 6 086
- Disabled_ 221

8.3.6.2 Skills Development

The department plans to place engineering and related graduates with various consultants for practical experience and further in-practice training and development. This is focused on the following strategies and programs:

- S3 - S4 internship development programme:
 - A number of engineering and related graduates are placed with various consultants for practical experience.
 - The external placement is mainly due to the lack of in-house capacity.
 - An in-service Training Implementation Plan has been developed.
- Young built environment professional programme:
 - The programme focuses on recruiting fresh graduates over a three-year placement period with the department's professional services provider.
 - The aim is to have fully registered professionals at the end of the period.
 - 88 placements on 54 projects.

8.3.6.3 Contractor Development/ Small Enterprise

Regarding the small contractors, targeted groups, youth and women, the DPWRT in adherence to the National Treasury guideline of 30% of each project. In accordance with the RI-RAMS 2024/2025, the diagram below has been proposed as a model to increase the success of this program.

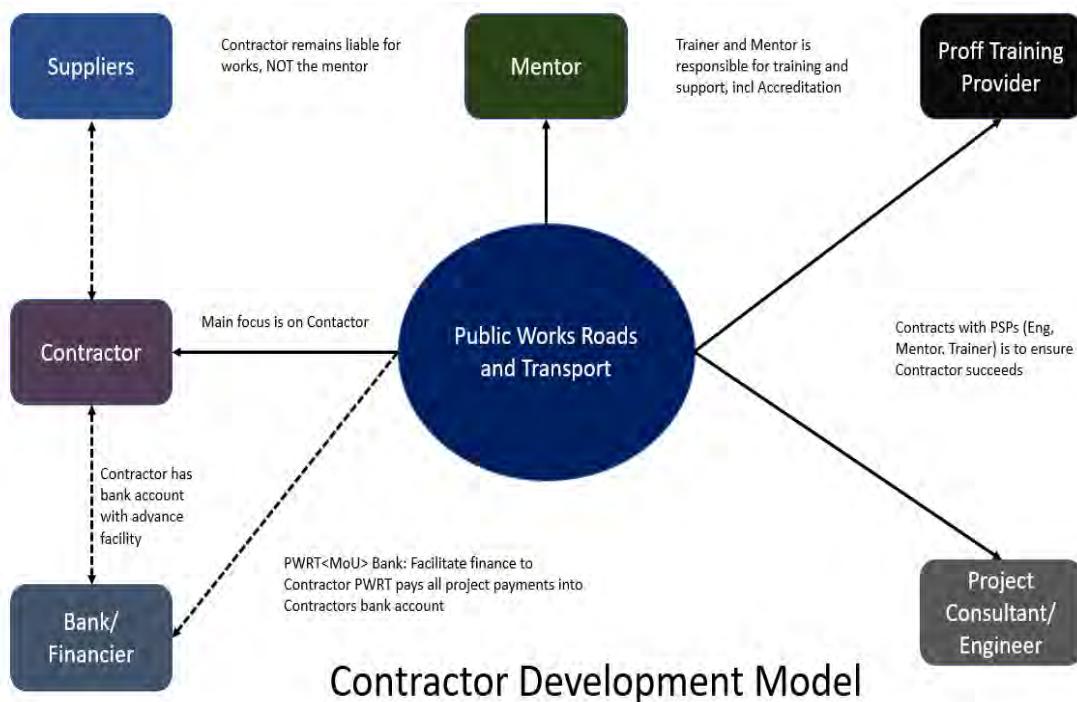


Figure 8-4: RI-RAMS 2024/2025 contractor development model

8.3.6.4 Community Participation

As per the RIA-RAMS, The DPWRT has developed a draft guideline on community participation during the project design and implementation stages to ensure that communities are adequately involved in and empowered by the infrastructure development.

The objectives are:

- To provide a platform where the communities are consulted and involved throughout the project life cycle;
- To facilitate and engage the priorities of the communities as far as the project identification, planning, design, implementation and closeout is concerned;
- Facilitate effective skills development through mentorship and training and skills transfer;
- To implement the democratic decentralization of people's participation in development and decision-making process;
- To set parameters to engagement with the communities; and
- To provide measures to monitor and evaluate the province's infrastructure departments' and municipalities' performance in encouraging meaningful community consultation and participation.

8.3.7 Identified Projects

The current list of projects from the Road Infrastructure Asset Management Plan (PI-RAMS) 2024/2025 for the projects 2024-2026 is indicated below as well as in Figure 8-1. The projects are identified as:

- Roads Planning_ 7 projects with a budget of R162 095 000
- Design and Materials_ 22 Projects with a budget of R161 948 000
- Construction_ 74 projects with a budget of R6 450 221 000
- Maintenance_ 33 projects with a budget of R2 816 365 000
- Road Programme Management_ 2 projects with a budget of R84 000 000
- Total of **138 projects with a budget of R9 674 629 000**

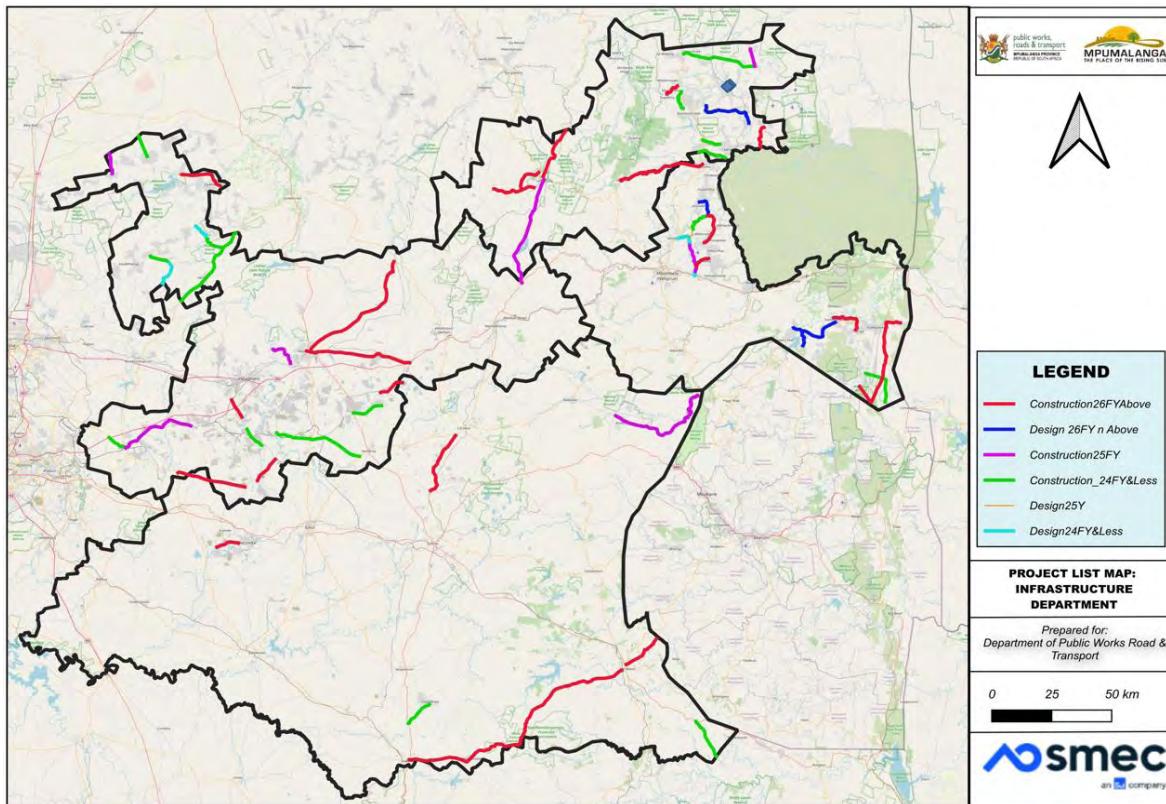


Figure 8-5: Geographical representation of the List of Design and Construction Projects

Table 8-1: RI-RAMS 2024/2025 Project List

Programme	Project Short Name	Budget
Roads Planning	Conditional Assessments Instrument surveys	R25 215 000.00
	Conditional Assessments roads and bridges	R32 630 000.00
	MMS	R29 000 000.00
	RAMS	R45 850 000.00
	Road Act	R4 000 000.00
	Road Master Plan	R15 900 000.00
	Road and Sign Technical Support	R9 500 000.00
Total		R162 095 000.00
Design and Materials	Design D2943	R4 000 000.00
	Design d2944	R2 000 000.00
	Bridge Maintenance	R4 000 000.00
	Coal Haul Projects	R0.00
	D1411 Engodini to Chuene	R6 000 000.00
	D1555 Arnot	R12 500 000.00

	D1723 eMoyeni	R8 500 000.00
	D2571 Lydenburg Bypass	R17 000 000.00
	D2902 Ramokgeletsane to Senotlelo	R7 000 000.00
	D2915 Zithabiseng Road	R8 000 000.00
	D2943 Scjoemansdaal to KaMaghekeza Rign Rd	R5 500 000.00
	D2969 Chuene to Manzini	R2 500 000.00
	D4385 Xanthia Phase 2	R3 000.00
	D636 Airport Rd	R8 500 000.00
	Design Office	R3 100 000.00
	Dreikoppies Bridge	R6 433 000.00
	Emalahleni Civic Bridge	R8 540 000.00
	P216/1 eMbalenhle to Secunda	R8 000 000.00
	P51/2 Middleburg to Stoffberg Phase 1	R6 500 000.00
	P51/2 Middleburg to Stoffberg Phase 2	R6 000 000.00
	P51/2 Middleburg to Stoffberg Phase 3	R13 000 000.00
	Road Safety Programme	R24 872 000.00
Total		R161 948 000.00
Construction	Road D1875 phase 2	R5 030 000.00
	Road D1875 phase 3	R2 379 000.00
	Road D2915	R135 000 000.00
	Road D567	R18 270 000.00
	Road D567	R18 270 000.00
	Road D1411	R13 800 000.00
	Road D20	R14 950 000.00
	Bridge on D4400 sand river	R29 735 000.00
	Bridge on D4422 Kumani	R141 750 000.00
	D1411 Engodini to Chuene	R66 700 000.00
	D1555 Arnot	R73 125 000.00
	D1723 eMoyeni	R44 766 000.00
	D2091 Marapyane Phase 2	R34 410 000.00
	D2274 Hendrina	R377 711 000.00
	D2486 Klipwal Phase 1	R114 175 000.00
	D2486 Klipwal Phase 2	R47 025 000.00
	D2571 Lydenburg Bypass	R138 000 000.00
	D2770 from P29/1	R115 000 000.00
	D281 Daggakraal	R181 614 000.00
	D2902 Ramokgeletsane to Senotlelo	R28 750 000.00
	D2940 Phiva	R41 185 000.00
	D2950 Dhludluma	R47 250 000.00
	D2950 Managana	R127 131 000.00
	D2950 Steenbok	R0.00
	D2952 Thambokhule Phase 2	R46 000 000.00
	D2952 Thambokhule Phase 3	R55 200 000.00
	D3930 Acornhoek Hluvukani Phase 1	R208 209 000.00
	D3954 Casteel	R46 000 000.00
	D3960 GaMotibidi Rainbow	R172 500 000.00
	D3973 Hoxani	R212 519 000.00

	D3976 Mathibela Phase 2	R18 270 000.00
	D4382 Belfast Justicia	R57 500 000.00
	D4407 Welverdiend 2	R145 727 000.00
	D481 Ebuhleni Manaar	R122 339 000.00
	D526 eMkondo Malhlatini Boarder Post	R250 313 000.00
	D636 Airport Rd	R48 347 000.00
	D935 Katjibane - Nokaneng Phase 1	R19 205 000.00
	Delmas TCC	R22 500 000.00
	Design IRMA Projects	R9 000 000.00
	Driekoppies Bridge	R13 567 000.00
	Emalahleni Civic Bridge	R11 460 000.00
	Footbridge in Zwelisha	R10 000.00
	Gedlembane road	R46 000 000.00
	IRMA Projects	R36 000 000.00
	Mashishing TCC	R31 336 000.00
	P120/2 van Dyksdrift Kriel	R101 250 000.00
	P132/1 Nkangala / Gert Sibande boundary	R122 188 000.00
	P141/1 Clewer - Kriel	R135 411 000.00
	P154/4 Middelburg - Wonderfontein Phase 2	R136 088 000.00
	P170/1 Gaskop	R250 887 000.00
	P171/1 Mashishing - Sekhukune Phase 2	R100 125 000.00
	P182/1 van Dyksdrift Hendrina Phase 3	R138 400 000.00
	P216/1 eMbelenhle to Secunda	R67 500 000.00
	P26/5 Carolina - Breyten	R108 000 000.00
	P29/1 Kendal - Delmas	R157 472 000.00
	Rehabilitation: P26/5 from km 16 at D1388 to km 26 at P52/1 between Carolina and Breyten	R108 000 000.00
	P33/4 Hazyview - Sabie Phase 1	R162 000 000.00
	P33/4 Hazyview - Sabie Phase 2	R101 250 000.00
	P36/1 Delmas - N12	R143 899 000.00
	P51/2 Middelburg to Stoffberg Phase 1	R78 750 000.00
	P51/2 Middelburg to Stoffberg Phase 2	R78 750 000.00
	P7/1 Special maintenance	R0.00
	P7/2 Special maintenance	R0.00
	P8/1 Mashishing - Bambi Phase 3	R195 463 000.00
	P8/1 Mashishing - Bambi Phase 4	R165 600 000.00
	P8/2 Mashishing - Ohrigstad Phase 1	R112 500 000.00
	P95/1 (Verena to Groblersdal)	R73 125 000.00
	P95/1 Verena - Gauteng	R176 705 000.00
	Paving Rural Municipal Roads	R52 000 000.00
	Rock Fall Protection on P57/2	R42 450 000.00
	Sinkhole on P9/1 near Graskop	R19 435 000.00
	Slip Failure on D1043 near Graskop	R17 595 000.00
	Tekwane Bridge	R18 400 000.00
	Welisizwe	R198 950 000.00
	Total	R6 450 221 000.00
	Maintenance	Pavement maintenance

	Road Safety Programme - Implementation	R62 000 000.00
	Special Mainetance	R74 000 000.00
	Bridge Maintenace	R62 560 000.00
	Cleaning of road reserves	R3 150 000.00
	Culvert Maintenace	R39 730 000.00
	Distance Markers	R1 121 000.00
	Emergency Patching	R92 500 000.00
	Emergency Patching	R107 500 000.00
	Fencing	R720 000.00
	Fire Breaks	R24 000.00
	Flood Damage repairs internal	R10 000 000.00
	Flood Damage repairs Outsourced	R10 000 000.00
	Gabions	R22 825 000.00
	Grading	R109 000 000.00
	Grass Cutting	R0.00
	Gaurdrails	R99 261 000.00
	Mechanised Pothole patching	R74 334 000.00
	Municipal support local	R35 000 000.00
	Municipal Support - Towns	R28 750 000.00
	Patching	R228 450 000.00
	Regraveling (Head Office)	R114 000 000.00
	Regraveling (Regions)	R128 842 000.00
	Reseal Coal Haul roads	R356 000 000.00
	Reseal Non Coal roads	R580 500 000.00
	Road marking & Road studs	R44 440 000.00
	Road signs	R38 000 000.00
	Shoulder maintenance	R19 392 000.00
	Side drain maintenance	R22 500 000.00
	Siyatentela Road Manienatance projects	R220 000 000.00
	Special Repairs Coal Haul roads	R59 936 000.00
	Weed control	R27 500 000.00
	Yellow Fleet Maintenance	R61 830 000.00
Total		R2 816 365 000.00
Road Programme Management	PMU (Eq Share)	R42 000 000.00
	PMU (PRMG)	R42 000 000.00

8.4 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 8-2: Project and Strategy responsibilities

Project and Strategies description	Responsibilities
Provincial Mpumalai Prepared Mpumalai	SMEC Internal Ref. BG426 17 March 2025

	Local Municipality	District Municipality	Provincial	National Government
Coal Haul Road Rehabilitation Programme		x	x	
Upgrade and Rehabilitation Projects (RI-AMP)		x	x	x
RI-RAMS Work Opportunities: Expanded Public Works Programme (EPWP)	x	x	x	
Road Infrastructure Development			x	
Bridge Construction and Maintenance		x	x	
Integrated Rural Mobility and Access		x	x	
Develop and implement Performance Measures Projects			x	
Improvement Programme projects			x	
Monitoring and review projects			x	
Update RAMS			x	
Routine Maintenance Plan			x	
Rehabilitation Plan			x	
Internship Development Programme			x	
Youth Building Environment Professional Programme			x	
Community Participation Guideline			x	
7 PI-RAMS Roads Planning Projects			x	
22 PI-RAMS Design and Materials Projects			x	
74 PI-RAMS Construction Projects			x	
33 PI-RAMS Maintenance Projects			x	
2 PI-RAMS Road Programme Management Projects			x	

This section adheres to objectives 1, 2, 4.

9 Chapter 9: Transport Management Strategy, including hazardous substances.

9.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Transport Management Strategy Chapter are defined as follows:

This chapter must deal with transport management aspects and must include the following-

- a) A freight transport strategy;
- b) Routes for the movement of dangerous goods and safety measures relating to such goods;
- c) Intelligent transport systems measures as applied on roads of provincial significance;
- d) Measures for dealing with accidents and emergencies (incident management); and
- e) A travel demand management strategy relevant to the provincial transport system.

The various aspects involved in the freight strategy and cross-border strategy are summarised in this chapter. A summary of the weighbridges in Mpumalanga, the aspects that should be taken into account as part of overloading control, as well as the routes and entities responsible for the overloading control on the routes are listed in this chapter. A list of the planned projects to rehabilitate and improve the coal roads and the issues related to the road and rail network in terms of freight transport is discussed in this chapter. The initiatives that should be in place for dangerous goods transport are summarised in this chapter, as well as a list of intelligent transport solutions that can be applied to road network system. Travel demand management strategies that can be implemented are summarised in this chapter.

9.2 Background

Freight is defined as the movement of goods or cargo between two points. It is a coordinated bundle of transport and logistics infrastructure and services to facilitate multi-modal trade and transportation flows between major points of trade. There is no standard limit in size quality or type of the cargo being transported that qualifies it to be called freight. Mpumalanga is situated in the eastern part of South Africa with direct access to two neighbouring countries, and to South Africa's economic hub, the Gauteng province. Mpumalanga is neighbouring with Mozambique and Eswatini. The province experiences high volume of freight movement on the Maputo corridor linking Gauteng and Mozambique through Mpumalanga. Other corridors that contribute to the province high volume of freight are N17 and N11 corridors. The N11 route links the Mpumalanga Province and Limpopo Province, while N17 links Gauteng with Eswatini via Mpumalanga.

Currently road freight transport is the most dominant means of land freight transport in Mpumalanga, which is the same for the countries freight transport movement. According to (DoT, 2017) land freight transport is moving over 80% of the national freight logistics of all industries cargoes, road freight constitute 89.8% (1.5 billion tons p.a) of all land freight volume, whilst the rail freight constitute 10.2% (220 million tons p.a). The choice of road as a means of freight transport is influenced in some instances by the reliability of mode, time to reach destination, safety of goods, and ease of access to collection or delivery points.

The province has 8 border posts linking South Africa to Mozambique and Eswatini. Out of 8 border posts the freight movement is observed through 4, namely Mananga and Jeppe's Reef Border post which is an entry for both Eswatini and Mozambique from South Africa; Lebombo Border Post linking South Africa to Mozambique; and Oshoek Border Post linking South Africa to Eswatini.

According to the SANRAL data, the average daily truck traffic (ADTT) is 1692 trucks moving between Nelspruit and Mozambique, 886 trucks moving between Ermelo and Eswatini, and 876 trucks moving between Malelane and Eswatini and Mozambique.

9.3 Policy and Guidelines Requirements

The provincial government is responsible for provincial transport policy and strategy within the framework of national policy and strategy the planning, co-ordination, and facilitation of land transport functions in the province and preparing the Provincial Land Transport Framework.

The relevant national, provincial, and local policy and legislation that guides the freight transport planning and infrastructure requirements as the following:

- From the national policy National Freight Logistics Strategy (NFLS) and the NATMAP have to be considered for freight policy.
- Road Freight Strategy for South Africa should be considered as the findings on the strategy are important.
- NATMAP 2050 should be considered as it incorporates the future freight development in South Africa.
- Previous PLTF should be considered as it incorporated the need to generate the current and implementable Framework.
- Provincial Growth and Development strategy facilitates the provincial economic growth that is considered for freight movement of goods and services.
- Transnet Long Term Planning Framework need to be considered for addressing the rail system operations and strategies.

Mpumalanga DPWRT is responsible for promulgating provincial legislation that promotes the objectives of the National Land Transport Act. It must also co-ordinate planning by municipalities to ensure the effective and efficient execution of land transport in the province. DPWRT must also liaise with other government departments in the national and provincial spheres that have responsibilities that impact on transport and land use planning issues.

9.4 Freight Challenges in Mpumalanga

9.4.1 Road Freight Network Issues

In terms of the province's road network, the key issues identified:

- The overall condition of the provincial paved road network is declining substantially, resulting in a significant backlog of maintenance requirements and consequent high maintenance cost requirements.
- The shift away from rail freight onto road continues to place significant pressure on the capacity of the road network, which results in high traffic congestion on the existing road infrastructure within industrial areas.
- Poor road conditions increase the cost of logistics and are therefore a cost to the economy.
- Accurate recent freight statistics, such as volumes and freight categories are difficult to come by, which hampers planning initiatives.
- Overload control is generally regarded as not effective due to a lack of facilities, management, and operational activities. Overloading heavy vehicles leading to the deterioration of the road infrastructure.
- Road safety is compromised on the road networks due to high road freight volume of heavy vehicles.
- Dangerous goods and hazardous materials are often transported through built up areas as there are no suitable alternative routes.

9.4.2 Rail Freight Network Issues

Rail freight in Mpumalanga is heavily on transportation of coal in and out of the province where it faces different key issues identified below:

- Rail is a national competency, which limits the extent to which Provincial Government can exert any direct influence on the development of the rail mode in the province.
- Poorly maintained rail infrastructure. Rail network infrastructure is aging, and majority of Railway line are in deterioration stage that is causing decline in the use of rail network shifting to road freight transportation with over 80% of freight on road network.
- Rail is currently uncompetitive against road freight companies resulting in rail suitable freight being transported on local, provincial, and national roads which is causing burden on the department for road maintenance cost.

- The future usage of rail is not clearly defined, there are complex regulations and inadequate policy that the rights of way are not protected.

Number of trucks that block the national freeways North on the N2 to Richards Bay and Northeast on the N3 to Gauteng. The impact of this has had a profound impact on our road network with export coal transported on rail having decreased from 73 million tonnes in 2017 to 58 million tonnes in 2022. That export coal is being moved by trucks, particularly from Mpumalanga to the North of KwaZulu-Natal, and has wreaked havoc on our provincial road network.

Rampant cable theft has damaged South Africa's railway signalling systems to the extent that train operators are effectively forced to operate "blindly", necessitating frequent stops at railway transfer stations and manual phone-ins to avoid train collisions.

Frequent theft of cables along South Africa's railway lines often took the train signalling system offline. Consequently, train control officers (TCOs) in the centralised traffic control centre (CTC) cannot see the specific location of each train and cannot notify operators whether it is safe to proceed or whether they must stop when they arrive at an interchange. Therefore, train operators must regularly stop trains at these locations, get out and investigate the position of the railways, and call in to the CTC to get approval to continue their route.

Trip between Ermelo in Mpumalanga and Richards Bay in KwaZulu-Natal that typically lasted nine hours would now take over double that time because each stop can take about 20 minutes, provided the machinist has cell phone signal.

Trains on South Africa's main coal export line collided early on 14 January 2024, shutting the route that's been plagued with issues. The disruption comes as Transnet struggles to improve its performance, particularly on the line that transports coal from mines in Mpumalanga to the Richards Bay Coal Terminal, the biggest facility of its kind on the continent (*My Broad Band, 2024*).

9.4.3 Cross-Border Freight Challenges

Cross-Border in Mpumalanga is heavily on transportation of products in and out of the country through the province borders where it faces different key challenges as identified below:

- Poor road network connectivity and missing links along the regional road transport network.
- There is lack of a railway line crossing through the Oshoek border post.
- Border post still operates as traditional two-stop border posts, with lack of systems integration and misaligned working hours.
- Lack of regional rules and standards to control heavy vehicles overloading.
- Lack of cross-border ranking facilities at the post.
- Lack of capacity for vehicle inspections at the border posts.

9.4.4 Freight Transport Challenges in Mpumalanga

Mpumalanga Freight Implementation Strategy identified general problem areas regarding freight transport. These are listed below:

- Lack of provincial traffic safety standards inhibits the movement of freight transport in Mpumalanga. This includes allocated hazardous materials (hazmat) routes, accident statistics and related infrastructure.
- Dominance of road freight results in a lack of competitiveness market within the freight transport sector, leading to an increase in logistics costs.
- Lack of alternative freight routes in the event of road closure due to incidents, such as crashes and spillage of hazardous substances.
- Deregulation of freight Routes - R40 route from Phalaborwa to Maputo and Lydenburg to Maputo which are identified as secondary corridors that feeds to the primary corridor N4.
- Lack of adequate overload control management causes tremendous pressure on the road transport network.
- Complex and burdensome compliance to ensure efficient Border Posts impact negatively on freight Transport in Mpumalanga.
- Insufficiently equipped Border Posts for management of freight transport in Mpumalanga.
- Lack of co-ordination between government levels regarding transport planning, maintenance, and operations.

- Lack of legislation limiting freight transport to designated national corridors.
- Lack of incentives for coal haulage strategies.
- Lack of guidelines and strategic initiatives for a shift from road to rail freight (Back to Rail).
- Rail transport is currently not adequate and efficient to attract customers. It leads to uncontrollable deterioration in the road infrastructure.
- Lack of legislation on the provision of dedicated lanes and routing on national freight transport routes including movement of dangerous goods.
- Lack of freight transport framework at provincial level. Freight Transport is coordinated at the national level through the NFLS, whilst there is no framework guiding freight transport planning and coordination at the provincial level.
- The existing rail freight monopoly does not benefit the general freight industry.
- Limited freight transport infrastructure, including intermodal facilities in the province.
- Lack of Incident Management System (IMS) mostly for transportation of dangerous goods in the province.
- Lack of demand for aviation freight transport in the province.
- Pipeline freight transport is not utilised sufficiently to its capacity.

Based on these challenges addressed there are key challenges regarding freight transport in the province detailed in Table 9-1.

Table 9-1: Freight Transport Challenges as identified in the Mpumalanga Freight Implementation Strategy

Cluster	Key Challenge	Description
Economic	High rate of Poverty and Unemployment rate	<ul style="list-style-type: none"> • The high level of unemployment and poverty affect the economic development and opening of new opportunities.
	Skills and Capacity	<ul style="list-style-type: none"> • Lack of technical skills in government spheres in Local and District Municipalities, which impact implementation plans of the developments.
Institutional	Lack of Integrated Planning	<ul style="list-style-type: none"> • Lack of coordinated freight transport planning. • Lack of planning between different departments impacting freight transportation in Mpumalanga.
	Lack of Freight Information	<ul style="list-style-type: none"> • Lack of provincial recently updated freight transport data. • Limited information addressing freight transport issues.
Legal and Policy	Lack of guideline plans	<ul style="list-style-type: none"> • Limited coordination between national, provincial, and local government spheres. • Lack of clear mandate for LM and DM into NLTA recommendations. • Lack of freight transport routes guideline including limiting of freight on other routes. • Lack of monitoring implementation pf policies, acts, and frameworks enacted at provincial level. • No legislation with regards to road to rail shift. • No legislation regulating implementation of transport activities and data by provincial government. • Lack of legislation providing for the implementation of the planning, institutional and regulatory recommendations made in the "NATMAP" report. • Lack of by-laws • Lack of legislation regulations operations of aviation and gathering of the movement data.
		<ul style="list-style-type: none"> • Less than 45% of provincial road network is paved. • Lack of truck stops facilities within the province. • Excessive use of road network by freight contributes to extensive deterioration of the roads. • Lack of comprehensive monitoring and enforcement plan to manage weighing equipment to address the issue of overloading. • Inadequate road maintenance and upgrade support. And few funds and finance generating programmes for road maintenance.
Infrastructure	Road	<ul style="list-style-type: none"> • Lack of technical skills on rail which put more pressure on road transport. • Underutilisation of rail infrastructure resulting in uncontrolled deterioration of rail infrastructure. • Lack of reliable, efficient and predictable service on rail transport.
	Rail	<ul style="list-style-type: none"> • Lack of technical skills on rail which put more pressure on road transport. • Underutilisation of rail infrastructure resulting in uncontrolled deterioration of rail infrastructure. • Lack of reliable, efficient and predictable service on rail transport.

Operations	Air	<ul style="list-style-type: none"> Lack of intermodal facilities for loading and unloading. Underutilisation of the Airport facilities. Lack of freight services marketing. Lack of bulk commodities handling facilities.
	Pipeline	<ul style="list-style-type: none"> Pipeline infrastructure is underutilised.
	Road	<ul style="list-style-type: none"> Heavy vehicles Overloading contributing to deterioration of road infrastructure. Cross-border operations need review and reduce congestion and delay during the process. Lack of visibility of trucks at night. Dangerous good movement challenges and lack of incident management systems.
	Rail	<ul style="list-style-type: none"> Freight transport is more on road than rail which is loss of market for rail transport. Inadequate rail network services.
	Air	<ul style="list-style-type: none"> Private airfield does not comply with regulations for movement of freight. Lack of freight data recording.
	Pipeline	<ul style="list-style-type: none"> Movement of liquid goods that are supposed to be transported by pipeline are being transported by road.

Source: Department of Public Works, Roads and Transport, Mpumalanga, 2012. Mpumalanga Freight Transport Plan (Final Draft).

9.5 Overload Control and Strategy

From the challenges and network issues, freight overloading is a major issue in the province of Mpumalanga. Overload control is an important control method to regulate heavy vehicle movement and to prevent excessive road damage.

9.5.1 Overview of Overload control

In South Africa there is a major problem of heavy vehicles overloading on road freight transport system. Overloading of heavy vehicles is dangerous according to a road safety point of view and have potential to damage road pavement and infrastructure, such as bridges and buildings due to the movement of overloaded trucks, which pose a safety hazard to other road users. According to (MDPWRT, 2024) about 60% of the damage to roads in South Africa is caused by overloaded heavy vehicles, representing a massive R700 to R800 million per annum. The result has been a steady deterioration of the freight corridor road network in South Africa during the past 20 - 25 years. The early deterioration of the economy's vital infrastructure inevitably undermines road safety, further contributing to the already high number of fatalities, also overloading results in unfair competition between road transport operators and between road and other freight modes of transport.

9.5.2 Definition of Overloaded Vehicles

Overloaded vehicles refer to vehicles that exceed one or more of the mass limits in terms of Regulations 234 to 242 of the National Road Traffic Regulations (NRTR), 2000, Regulations 237, 239, and 242 were amended in 2012. The term chargeable refers to all vehicles that exceed the tolerance (a prosecution guideline) applied to all mass limits. If the mass of an axle, axle unit, vehicle or combination of vehicles exceeds one or more of the legal limits, the vehicle is overloaded, but only if the tolerance limit is exceeded can the driver/operator be prosecuted.

The Road Traffic Act, 1996 (Act No. 93 of 1996), and the Road Traffic Regulations, 2000, made under Section 75 of this Act determine the mass limits of vehicles used on public roads. The relevant regulations are Regulations 234 to 243.

9.5.3 Institutional Responsibility for Overload Control

In Mpumalanga the road network is managed by different spheres of government namely SANRAL, Mpumalanga DPWRT, and municipalities. The responsibility for overload control in Mpumalanga is controlled by Mpumalanga Provincial Government. TRAC is responsible for control of overloading on the toll road to prevent above normal deterioration of the road surface. Mpumalanga provincial government provide funds, infrastructure, and operators for the traffic officers for effective management of the overload control.

Planning, resource management, skills, and capacity at the majority of municipalities and provinces are severely lacking. DPWRT responsibilities include maintenance and repairs of all overload control facilities and equipment, operations, law enforcement functions and monitoring and evaluation of operations. The primary cause of the ineffectiveness of the monitoring and control system is lack of coordinating management.

The overload control strategy in Mpumalanga comprise of screening stations and static weighing to control overloading. Figure 9-1 below, shows the proposed strategy based on the operation of static weighbridges, screening stations, and check points.

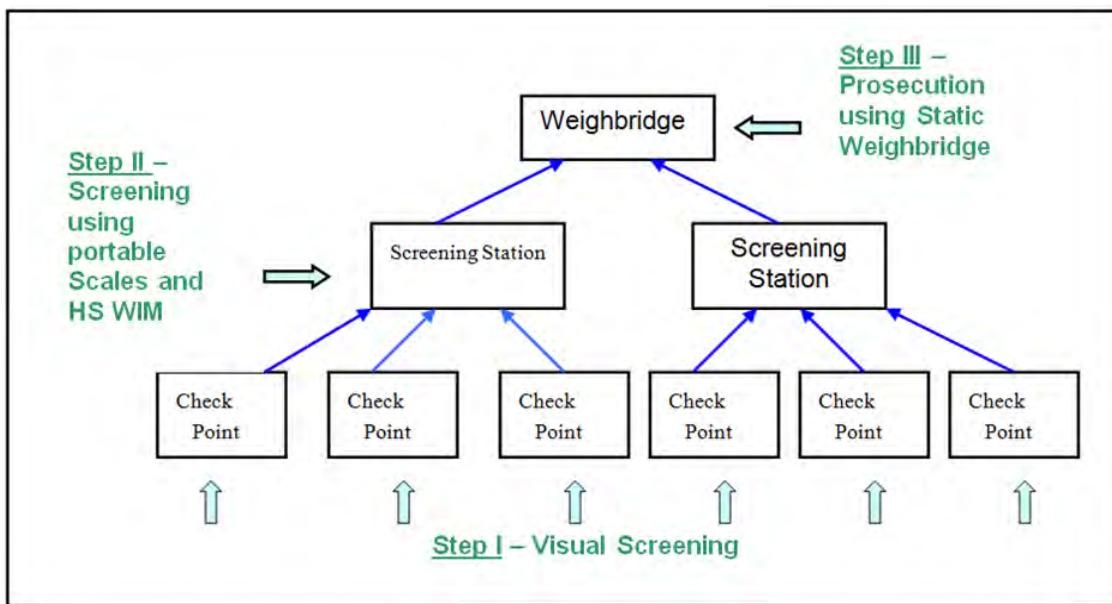


Figure 9-1: Overload Control Activities flow diagram.

- **Static weighbridges:** Required for prosecutions for overloaded vehicles and they are expensive. This is the stage where the law enforcement process and prosecution are done.
- **Screening Stations:** This is where the screening of the potential overloaded vehicles occurs, it is conducted using weigh-in-motion equipment. Check points are positioned and rotated on a purely subjective basis (as and where required). Check points require no specific infrastructure, but the opportunity should exist to stop trucks safely if they are suspected of being overloaded. The non-static screening station increases the probability for regular and non-regular overloading offenders being caught.
- **Checkpoints:** this is based on the visual screening of heavy vehicles. Check points are positioned and rotated on a purely subjective basis (as and where required). Check points require no specific infrastructure, but the opportunity should exist to stop trucks safely if they are suspected of being overloaded.

The prevention of deviation of overloaded trucks could be addressed with weight restrictions on secondary routes or HV bans (signage) to ensure freight carrying vehicles can only move on specific corridors. If caught on any other route other than for delivery purposes, they are re-routed to the main freight corridors.

9.5.4 Overload Control in Mpumalanga

The overload control is to ensure that legal loads, which should be set at a level that minimizes total transport costs to the national economy and to ensure road safety on our national road infrastructure. Heavy vehicles overloading a major problem not only in Mpumalanga, but in the country and other SADC countries. Violation of overload control limits by overloaded heavy vehicles and associated cause a disproportionately damage to on road infrastructure, which is not even receiving adequate attention for road maintenance, which can be very costly to the economy of the country.

The most economic and efficient control of overloading would be through self-regulation, this principle of self-regulation is not sufficient to control overloading on South Africa's Road Network, the most realistic solution to the overloading problem is a comprehensive and effective law enforcement programme, consisting of a network of strategically located weighbridges.

9.5.5 Weighbridge Location in Mpumalanga

Weighbridge location is of crucial importance in order to minimise the effect of overloaded vehicles on provincial roads. The efficiency of a weighbridge can be influenced by one or more of the following aspects:

- Location.
- Design and infrastructure.
- Management; and
- Operations.

In Mpumalanga there are 20 (Including lay-bys) operational weighbridges. These weighbridges are strategically located along the major and sub freight corridors detailed in Table 3-27 and Figure 3-26. The most critical of these aspects is the location. A well-designed weighbridge, equipped with state-of-the-art weighing and computer systems and being operated by highly capable personnel, will not be efficient, if it is in the wrong position.

Aspects that play a role in determining the location of weighbridges are the economic viability and strategic matters, which are on the planning phase, and topography, geometric standards, availability of services, the cost of land and environmental impact for the design and construction phase.

Efficient capital for maintenance and operational cost for overload control can help in saving cost in road infrastructure maintenance, due to overloading heavy vehicle damages. The economic viability analysis should also be conducted over the lifetime of the weighbridge network (Bosman & Kapofi, 2010).

Strategic matters include the proximity of the weighbridge to a port-of-entry border post or generators of heavy vehicle traffic, such as coal haulage route and whether the location is such that escape routes are minimised and that the greatest impact to reduce overloading can be achieved.

Overload control plan is cost-effective if the overload control facilities cost is less than the road infrastructure maintenance cost based on the effect of overloading damage. To determine how the location can be optimized within an overload control network, the Overload control index which convert the different NPVs of overloads control benefits and costs, to rank the options of the overload control. The OLCI for financially viable overload control should be equal or greater than two, formula illustrated in Figure 9-2 below according to (Bosman & Kapofi, 2010).

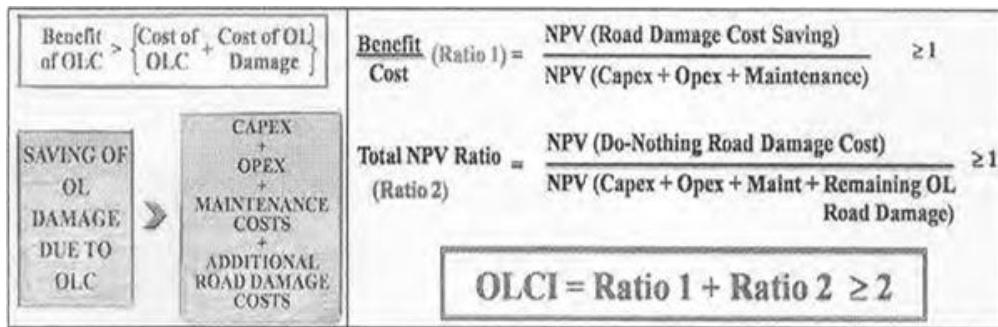


Figure 9-2: Formula for Calculations of the OLCI

A review of Mpumalanga's existing overload control infrastructure is required and implementation of an improved operational system of the weighbridge stations need to be addressed within the province. Virtual weigh stations can be used in Mpumalanga and can have a greater impact on reducing overloading of heavy vehicles.

Portable Scale can be considered, but not for law enforcement purposes rather for overloading vehicles identification. These can be implemented at a strategic location within a reasonable distance from the weighbridge's stations.

9.5.6 Overload Control Law Enforcement

The Mpumalanga DPWRT states the following challenges and responses regarding Law Enforcement for overloading:

- Reduce all overloading.
- Special weighing operations are required to address this challenge on major routes, as well as in problem areas on lesser routes.
- Increase payment of summonses to 25% of issued summonses.
- The current payment rate is 21,79% of summonses issued. An improved warrant of arrest system is required to raise this rate, this can be done by involving the Department of Justice in special operations.
- Identify and prosecute habitual offenders.
- Some owners and operators do not comply with overloading legislation. These operators must be considered for withdrawal of operator's cards, thus seizing their operations in the area.

9.6 Freight Transport Strategy

The purpose of freight strategy is to provide an implementation plan to improve the Mpumalanga Freight Network to meet the demand for movement of goods and services at a reasonable cost and improve provincial economy that will support their development goals.

Freight transport demand in Mpumalanga is very high due to the presence of industries that depends on freight transport for high volume commodities, such as coal for the generation of electricity and timber for the manufacturing of timber products. Having an efficient ability for the movements of goods to the end users of the products at the right time and with good cost, is good for the economy of the province and the country. Freight movement is a very essential contributor of economic activities and an accessible freight transport system is a need for economic growth.

9.6.1 Coal Haulage Strategy in Mpumalanga

Mpumalanga province is the highest coal producer in South Africa. The province also houses coal-based industries, like Sasol and ESKOM power stations as shown in Figure 3-24. The strategy is to provide efficient, safe, and environmentally friendly coal haulage in Mpumalanga.

Coal haulage routes are routes that are utilised for transportation of coal from the coal mines to the industries, such as ESKOM, to produce electricity (Nkangala DM, 2022). The increased demand for electricity is increasing the demand of coal supply to the power stations that has resulted in the damaging of the road network in Mpumalanga.

The criteria used to identify the coal haul route network includes:

- Freight Infrastructure condition (more likely to be road condition)
- Coal Volumes: Using demand and supply analysis for production levels and transportation requirements.
- Road's authority maintenance prioritization.
- Impact of the road use by the haulers (Route optimization).
- Age of the mine and duration of current contract also to be considered.

This addresses the approach to coal haulage in the province by optimizing the existing network to meet stakeholders needs.

Coal has contributed to the South African economy for more than a century and remains a dominant part of the energy mix. About 80% of the total production of coal in RSA is undertaken in the Mpumalanga Province and, consequently, most of Eskom's coal-fired plants are also located there. This has resulted in huge dependency on the exploitation of coal in the Mpumalanga regional economy and the municipalities of eMalahleni (Witbank), Steve Tshwete (Middelburg), Govan Mbeki (Secunda), and Msukaligwa (Ermelo).

Victor Khanye Local Municipality in Mpumalanga unveiled the coal haulage rehabilitation project on the 25 April 2024, which began in November 2021 and was completed in March 2024 at a cost of approximately R170 million, according to the Department of Public Works, Roads, and Transport. The road was in a deplorable condition and had seen numerous fatal accidents (*Victor Khanye Local Municipality Newsletter, 2024*).

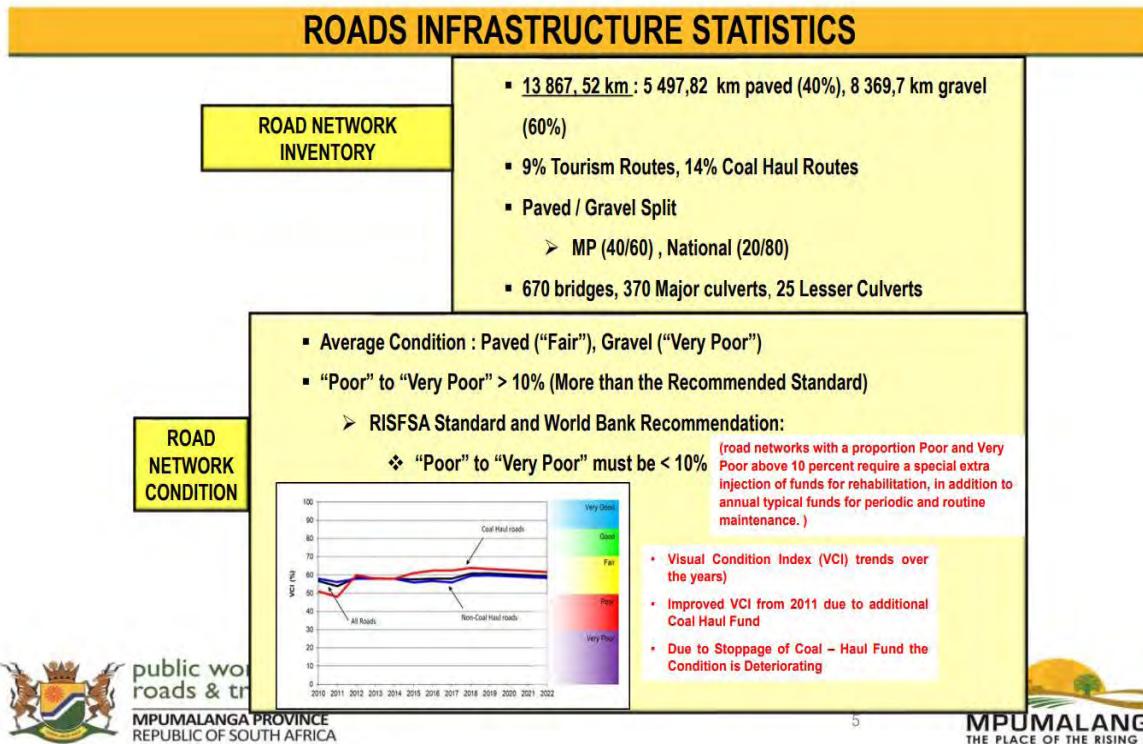


Figure 9-3: State of Provincial Roads Infrastructure (Mpumalanga Provincial Week Presentation, 2023)

From this, strategic infrastructure has been proposed for the 2023/2024 financial year regarding the coal haul roads, refer to the table below.

Table 9-2: Strategic Infrastructure Projects 2023/24 for Coal Haul Roads

Strategic Infrastructure Projects 2023/24 for Coal Haul Roads				
No.	Description	Purpose	Project Status	Allocated Budget R'000
1	Rehabilitation of Coal Haul Road P182/1 (R542) from km 26.25 to R38 between Van Dyksdrift and Hendrina - Phase 3 (12.1 km)	Coal & Economic route	Procurement	6 228
2	Rehabilitation of Coal Haul road P29/1 (R555) from km 50 at D2669 to km 62.55 at D2821 (Kendal towards Delmas) (12.55 km)	Coal & Economic route	Implementation	55 596
3	Rehabilitation of Coal Haul Road P36/1 (R50) from km 62.6 to km 71.7 between Delmas and the N12 (9.1 km)	Coal & Economic route	Implementation	59 718
4	Upgrading of Coal Haul Road D2274 from N11 at km 18.7 to D1398 at km 31.7 North of Hendrina (13.0 km)	Coal & Economic route	Implementation	72292

5	The Rehabilitation of Coal Haul Road P120/2 Between Junction with P120/1 in Van Dyksdrift and Junction with P52/3 Towards Kriel (12.60 km)	Coal & Economic route	Procurement		8288
6	Rehabilitation of Coal Haul Road P26/5 from km 16 at D1388 to km 26 at P52/1 between Carolina and Breyten Phase 1 Part B (8.94 km)	Coal & Economic route	Procurement		8143
					210 265

Projects planned for completion in 2023-24 for coal haul roads (*Mpumalanga Provincial Week Presentation, 2023*)

- Rehabilitation of Coal Haul Road P36/1 (R50) from km 62.6 to km 71.7 between Delmas and the N12 (9.1km).
- Rehabilitation of Coal Haul Road P29/1 (R555) from km 50 at D2669 to km 62.55 at D2821 (Kendal towards Delmas) (12.55 km).
- Upgrading of Coal Haul Road D2274 from the N11 to the D1398 at km 31.7 North of Hendrina (13 km).
- Rehabilitation of Coal Haul Road P182/1 (R542) from km 26.25 to the R38 between Van Dyksdrift and Hendrina - Phase 3 (12.1 km).

9.6.2 Mpumalanga Freight Transport Strategy and Implementation Plan

The freight strategies in Mpumalanga should include promoting road to rail migration, management of freight vehicles and overload control, and develop an Incident Management System for the province. Freight transport challenges identified can be mitigated by initiating projects that will aid in developing and managing freight transport in Mpumalanga to be efficient and safer.

It is recommended that Integrated Transport Plans of the various District and Local Authorities in Mpumalanga align themselves in general with the projects on a provincial level. The projects and initiatives below were extracted from the Mpumalanga Freight Transportation Plan (MFTP).

Table 9-3: Proposed Provincial Freight Transport Implementation Plan. Source MFTP

Project No.	Project	Purpose	Proposed Implementation Agent
Legislative Policy Projects			
1	Monitoring and Enforcement plan of escape routes	To increase efficient plan to deal with overloading of heavy vehicles	Mpumalanga CSSL (Traffic)
2	Border Post operating plan for 24 hours.	Ease congestion and traffic flow at the border post.	DPWRT
3	Review Mpumalanga Road Act	Improve the provincial road safety and security	DPWRT
4	Increasing number of agents to operate at the border for the full duration of operations.	To ease the operation at the border, efficient traffic flow and improve safety.	C-BRTA
5	Development of policy guideline that address development, implementation, and maintenance of provincial land transport information to address freight challenges.	To improve law enforcement problem within the province	DoT and DPWRT
7	Improvements of intermodal infrastructure facilities and layouts to provide adequate capacity through liaison of Government departments	Increase capacity at the border posts and ease congestion at the border	DoT, DPWRT, and C-BRTA
8	Development of Transport policy for planning at the Municipalities level.	Establish relevant structures and realign policies at local level	DPWRT
9	Develop a Provincial policy for the movement of hazardous substance and abnormal loads.	To increase capacity and law enforcement problem for transportation of HAZMAT.	DCSSL (Traffic), DPWRT, and (LM & DM)

Traffic Control Projects

10	Monitoring and Enforcement Plan of escape routes	To increase efficiency to reduce overloading issues on the escape routes.	
11	Developing of new TCC (weighbridge) in Lydenburg	To increase efficiency at TCCs	DCSSL (Traffic)
12	Development of a maintenance plan for TCC (weighbridges)		
13	Investigation into the reasons for closure of existing TCC and Approach to their Optimisation	To increase efficiency curb overloading on the escape routes.	
Incident Management System			
14	Development of IMS plan 'HAZMAT emergency action system' to other freight transport corridor.	To improve the response to emergencies on freight transport routes.	DCSSL (Traffic)
HAZMAT Projects			
15	Development of legislation compelling HAZMAT trucks to display relevant information.	Improve the efficiency and assistance in accordance with HAZMAT been transported.	DCSSL (Traffic)
16	Development, Monitoring and Enforcement of a Hazmat Routes Plan.	To limit exposure and impact of HAZMAT related accidents and ensure compliance with the HAZMAT regulations.	
17	Development of policy framework to govern movement of HAZMAT	To improve movement of hazmat on different routes.	DPWRT AND DCSSL (Traffic)
Rail Freight Projects			
18	Re-opening (freight) closed railway network for alignment with Transnet's branch line strategy.	Ease freight transportation of commodities by road network.	Transnet
19	Feasibility Study for Intermodal facilities at Malelane.	Ease of freight commodities transportation by road.	Transnet
20	Planning investigation/feasibility study of a rail link with the Airports.	Feasibility of introducing new rail links for air freight in Mpumalanga.	Transnet, DPWRT and KMIA
21	Development of an Agricultural corridor.	Ease the transportation of agricultural products	Transnet
22	Development of policy framework to govern rail-based corridor as opposed to road-based corridor.	Ease the movement of freight on the road network and more sustainable freight movement.	DoT
Road Infrastructure Projects			
23	Rehabilitation of the Coal Haulage Network.	Enhance accessibility and transportation of coal around Mpumalanga	SANRAL, DPWRT, LM, and DM
24	National Road widening (Increasing Lanes)		SANRAL
25	Upgrade and additional of the provincial roads.	Enhance accessibility	DPWRT
26	Development of the heavy vehicle and HAZMAT vehicles by-pass	To enhance road safety and reduce congestion on the road network in residential areas	SANRAL and DPWRT
27	Development of feasibility Study for truck stop facilities along all strategic freight corridor.	Improve road safety and reduce crashes by enabling truckers to rest and get something to eat.	DPWRT
28	Rehabilitation and construction of bridges.		DPWRT, LM, and DM
AIR Projects			
21	Expand the runway at KMIA from a current size	To enable the airport to handle larger aircraft	KMIA
22	Development of Nkangala International Airport	To enhance pressure from OR Tambo IA.	ACSA
Pipeline Projects			
23	Development of policy govern the use of pipeline for liquid freight goods.		Transnet
24	Development of Maputo to Gauteng Pipeline.		Petroline RSA and Petroline SARL

Institutional Projects			
25	Establishment of freight logistic organisation with transparency in government's long-term transport and land-use planning	To promote integrated planning across all government spheres and other stakeholders	DPWRT
26	Freight transport functionality and capacitation of freight transport.	Increase efficiency of the freight industry.	DPWRT

Source: Department of Public Works, Roads and Transport, Mpumalanga, 2012. Mpumalanga Freight Transport Plan (Final Draft).

9.7 Cross-Border Freight Strategy

This Strategy aims to position Mpumalanga province to work closely with C-BRTA. This focuses on resolving cross-border freight operational challenges and implementing strategic plans fostering sustainable growth of cross-border freight transport through Mpumalanga.

Cross-Border freight is the trade section that allow goods and service to pass through the country border posts to another country. This facilitate compliance with legal and tax regulations as the products are shipped out and into the country. C-BRTA is geared to effectively respond to current cross-border issues that are affecting road transport operation in South Africa. Cross-border road transport plays a major role in facilitating and enhancing international economic activities through its contribution to inter-trade and regional integration in SADC.

Through improved infrastructure, regulatory alignment, and stakeholder collaboration, Mpumalanga will strengthen its role as a strategic hub for regional trade and transport connectivity.

9.7.1 C-BRTA Legislative and Policy

C-BRTA have to harness to redefine the cross-border regulatory environment by implementing sectors programmes and application of standards and the Operator Compliance. C-BRTA shall comply with the constitution of the Republic of South Africa as the supreme law of this country.

Table 9-4: Legislative Mandate Summary

ACT	General Focus	Local Authority Responsibility
Cross-Border Road Transport Act, 1 of 1999	Focus on improving unimpeded transport flow by road of freight and passenger in the region.	Local Authorities must develop strategic plan on the movement at the border posts to empower road transport industry and business opportunities.
National Land Transport Act, 5 of 2009	Focus on providing the process of transforming and restructuring the national land transport system.	Local Authorities must develop freight cross-border strategy and identify border posts for trade and passenger movement.
National Road Traffic Act, 93 of 1993 (amended)	Provides the traffic regulations that govern licensing of motor vehicles, operation of motor vehicles, vehicle road worthiness, driver licensing, and fitness.	No specific imposed duty or responsibility on local authority in whose jurisdiction transport takes place.
Convention on Road Traffic, of 1968	Focus on facilitating road traffic and increase road safety by adopting road traffic rules.	
Tourism Act, 3 of 2014	Focus on development and promotion of sustainable tourism for the benefit of the residents and visitors.	Allows the District Municipalities to conduct law enforcement regarding road traffic regulations in the tourism sector.
Disaster Management Act, 57 of 2002	Integrated and co-ordinated disaster management policy that focuses on preventing reducing the risk of disasters, mitigating the severity of disasters.	Allows district municipality to create Municipal Disaster Management Advisory Forum. Every local municipality must prepare a Disaster Management Plan.

9.7.2 Cross-Border Freight State in Mpumalanga

Mpumalanga province have 7 border post, which have been progressively overburdened by the increased movement of people and goods. In Mpumalanga there are only inland Ports of Entry, which are particularly congested and stilling trade between Mozambique, eSwatini, and South Africa.

9.7.2.1 Mpumalanga Cross-Border Trade Corridors.

N4 – Maputo Corridor (Gauteng to Mozambique)

This corridor connects South Africa's Gauteng province via Mpumalanga with Mozambique's Maputo province. The corridor comprising road, rail, border posts and terminal facilities. It runs through the most highly industrialised and productive regions of South Africa (Maputo, 2024).

The corridor crosses at the Lebombo border post to Mozambique, which is the one of the busiest border posts in South Africa. Its nearest deep-water port is in Maputo, Mozambique.

Gauteng – eSwatini

This corridor supports the movement of freight, including agricultural products, mining outputs, and manufactured goods linking Gauteng via Secunda, Ermelo and Eswatini. This corridor has the cross-border into Eswatini crossing the Oshoek border post.

Ermelo – Pongola (Gauteng to eSwatini)

This is a sub-corridor, which runs on the N2 from Ermelo where it connects with Gauteng to Eswatini corridor through eMkhondo connects with Pongola crossing to eSwatini through Mahamba Border post.

9.7.2.2 Mpumalanga Border Posts

Lebombo Border

The Lebombo border crossing is situated between South Africa and Mozambique. The border operates 24 hours for passenger movement and 06:00 to 22:00 for commercial operations. Rail and Road service on the Maputo corridor connects to the Port of Maputo. SAPS and SARS conduct the vehicle inspections prior to departure, heavy vehicles undergo inspection at SARS inspection station. Due to only one vehicle to be processed at a time, not all heavy vehicles will be inspected. There is not an alternative inland border post for commercial traffic between South Africa and Mozambique. The boarder post is congested. There are two major roads that link to the border post namely: N4 and R571.

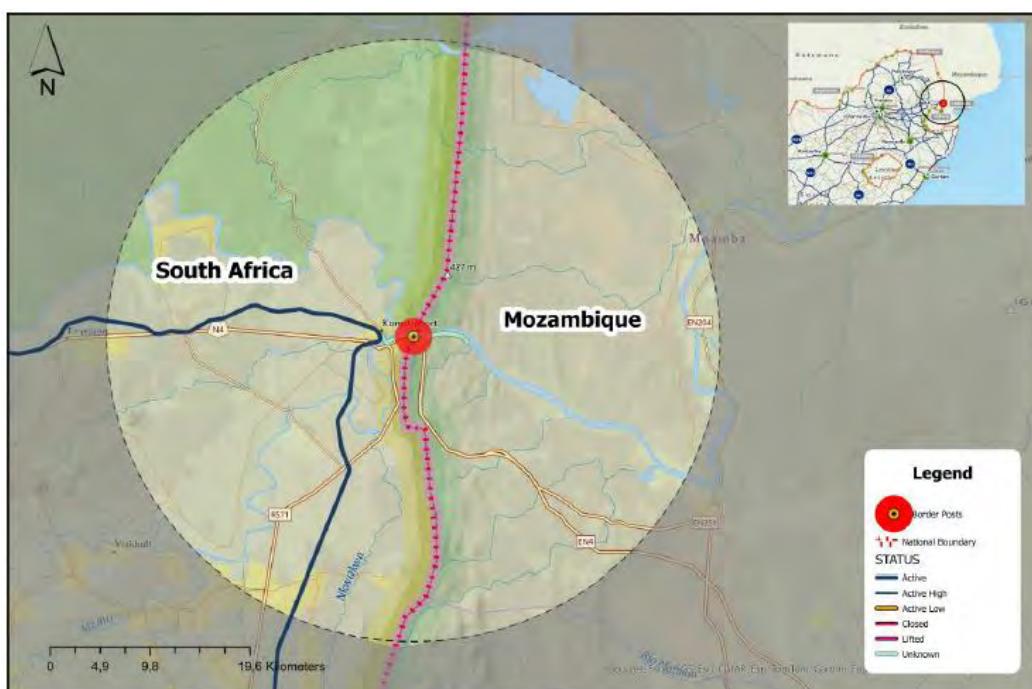


Figure 9-4: Roads to the Lebombo Border

National government is currently busy with amendments to the border post to improve efficiencies. Moreover, the NRMP identifies this border crossing as essential as the rail network is located at the crossing. However, both studies are being conducted at the stage of developing this PLTF.

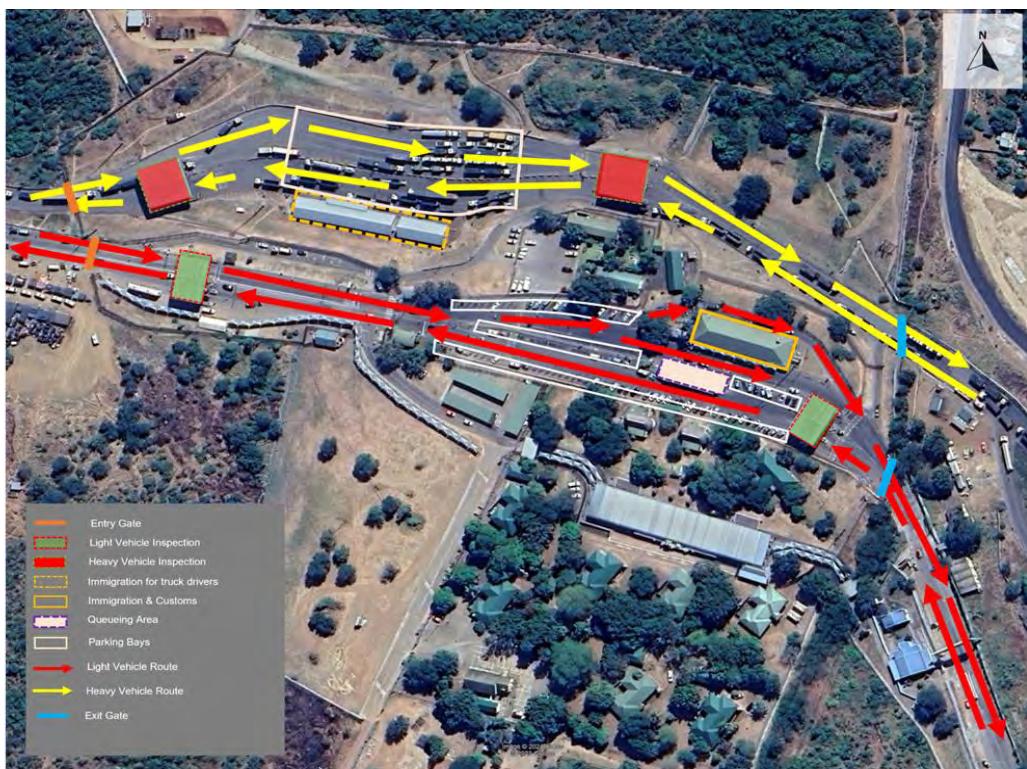


Figure 9-5: Lebombo Border Post

Oshoek Border

The Oshoek Border Post facilitate the transit between South Africa and eSwatini road services runs through this border between South Africa and eSwatini, there is no railway line that runs on the South African side of the border. SAPS and SARS conduct vehicle inspections for both heavy and passenger vehicles after custom procedures. Same as Lebombo Border post not all heavy vehicles are inspected due to only one vehicle can be inspected at a time. There are five alternative commercial border posts that facilitates connection between South Africa and eSwatini.

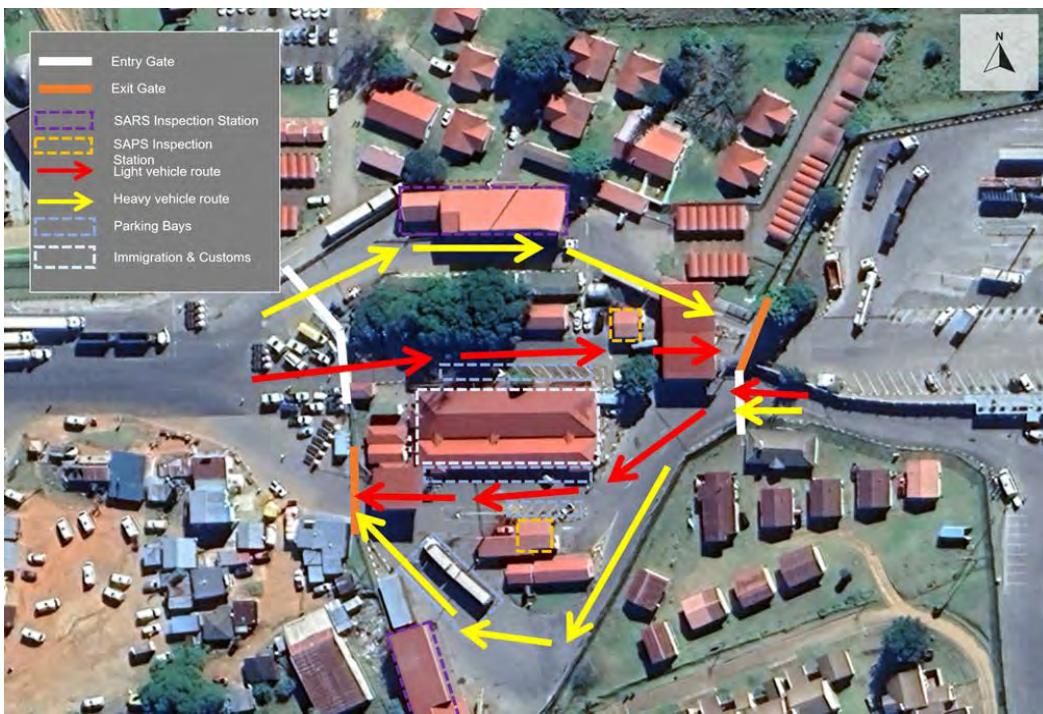


Figure 9-6: Oshoek Border Post

9.7.3 Cross-Border Strategy and Implementation Plan

The cross-border freight strategies in Mpumalanga should include development of key regulatory and operational strategy for the province and the country. Cross-border transport challenges identified can be mitigated by initiating projects that will aid in developing and managing cross-border transport in Mpumalanga to be efficient and reduce congestion at the border posts.

This can be done while working with C-BRTA to put in place policies and documentation for cross-border transportation.

Table 9-5: Proposed Cross-Border Transport Implementation Plan

Project No.	Project	Purpose	Proposed implementation Agent
1	Development of policy and regulatory reviews with C-BRTA	To understand the needs and the capacity at the Cross-Borders.	DoT
2	Development of the one-stop border post.	To improve the cross-border process and reduce congestions due traditional two-stop border.	DoT
3	Development of the multimodal facilities at the Border post.	Improve the transfer of goods and services.	DPWRT
4	Initiating the 24hours operational hours for both commercial and private transportation.	Reduce congestion during the crossing working hours.	SARS, SAPS, and DHA
5	Strategic security service development at the border post.	To monitor movement of goods and ensure safety across borders	SAPS

The cross-border strategy will help the cross-border transport through Mpumalanga province by improving infrastructure and enhancing traffic congestion at the border crossing the country.

9.8 Conceptual Freight Network

Movement of freight plays a crucial role on the economic development of the country and the province. Having an effective provincial freight network system is essential for the long-term growth and the development of Mpumalanga. A sufficient freight network ensures remote, regional, and urban businesses and communities have reliable access to goods and services. Also have capability for efficient movements of goods to other provinces and neighbouring countries also receiving goods into the province.

The conceptual freight network provides a layout of transportation routes and infrastructure for movement of goods, while providing a support tool to relevant stakeholders regarding the operations of freight movement in Mpumalanga. It aims to identify the main freight carrying routes that should receive priority in terms of budgeting requirements, overload control (including law enforcement), as well as initiatives to link the rural economy to the mainstream economy. The Mpumalanga Freight Data Bank has been developed for both rail and road transport, the rail transport information is limited as the provincial government have virtually no decision-making capability regarding infrastructure enhancements in the rail freight sector.

Qualitative assessment based on freight transport criteria was performed in order to derive the Strategic Freight Network. The following selected criteria were used:

- Principal origins and destinations of major freight generators/receivers (mining, agricultural and manufactured products, imports, and exports).
- Identified corridors along which the road freight is moved into, through and out of Mpumalanga.
- Linking the rural economy to the mainstream economy.

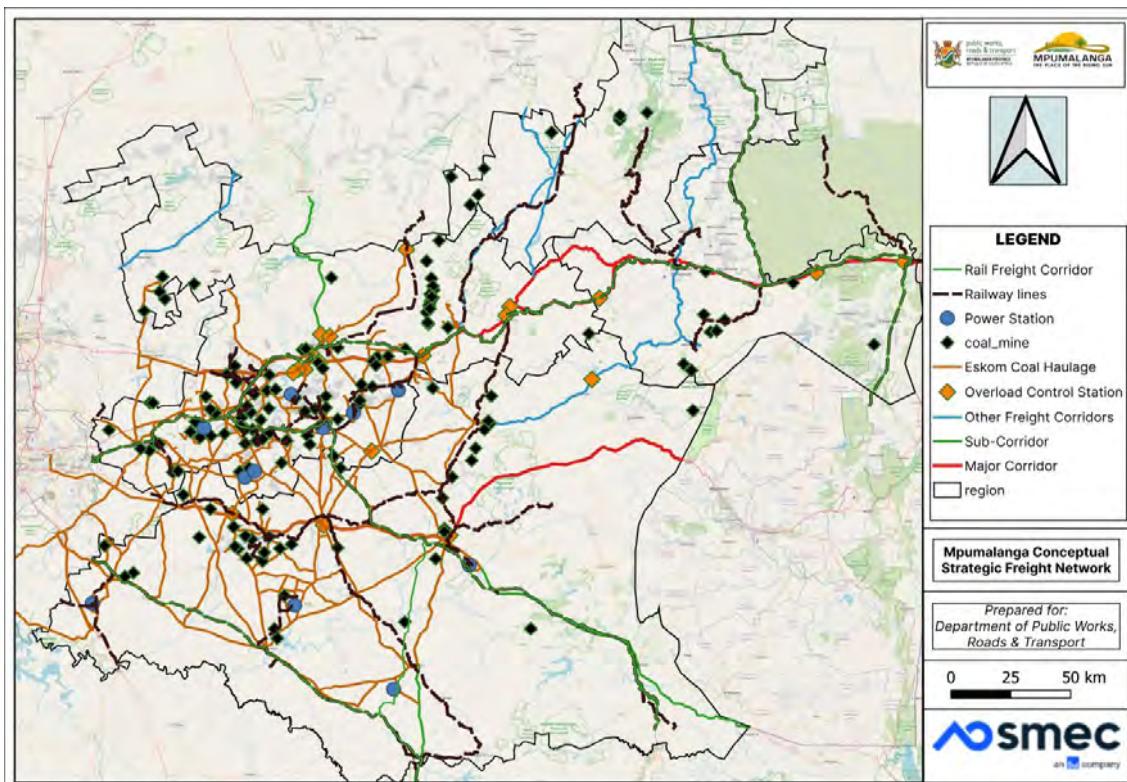


Figure 9-7: Conceptual Strategic Freight Network

9.9 Road to Rail (Back to Rail) Initiatives and Strategy

Back to rail initiative is South Africa's strategy to shift road freight movement back to the rail freight network, which also include passenger transport movement. The plan for this initiative is to reduce the burden on South Africa's Road infrastructure, due to high heavy vehicle movement. Transnet Freight Rail is the institution that plays

a crucial role in the freight network in South Africa. Policies and strategic decisions taken by Transnet may impact or have impacted negatively on the Mpumalanga provincial freight transport and logistics environment with regard to the effect on provincial road infrastructure and increasing provincial logistics costs. This chapter is to align to the National Rail Master Plan 2024-2029.

Achieving this initiative will help the provincial government to improve road safety on their road networks, minimizing the environmental impact, reduce traffic congestion by limited freight transport, reduce the pressure on law enforcement, and doing business will happen with lower logistics cost. In Mpumalanga there is high production of product in different industries like mining and agriculture, while the transportation of goods depends on the road infrastructure.

- Shift from road to rail for freight transport will help in reducing the use of the road network by heavy vehicles, as Mpumalanga is a major producer of coal which is the most contributor to road infrastructure damage within the province. Road safety will be improved as the number of heavy vehicles on the road is reduced.
- Investment in rail infrastructure will boost the economy of the province by job creation and there will be less cost to be used on road infrastructure maintenance. This initiative will benefit mining and agriculture industries as transportation cost will be lower.
- Real effective and pro-active manner is to use the mechanism to interact with Transnet to ensure that the provincial interests are duly recognised by Transnet and incorporated into their own national strategies. This will influence Transnet to shift more freight back to rail in Mpumalanga.
- Partnership of the involved stakeholders like Mpumalanga DPWRT, Transnet, and the private sector should be strengthened for proper initiatives.

According to (Transnet, 2017), back to rail will play crucial role in Mpumalanga freight transport movement by reducing traffic congestion and improvement of road infrastructure deterioration to sustainable development. The Road to Rail initiative will change the Mpumalanga transport network.

This initiative suggests that lobbying actions should be focused on influencing Transnet to move from road to rail by ensuring that the Transnet National Strategy is informed of Mpumalanga province needs and requirements. It must be noted that currently the NDoT is developing a National Rail Masterplan and this document will outline and plan the required rail corridors and infrastructure that will maximise the use of rail in South Africa.

9.10 Dangerous Goods Movement Strategy

The legislation pertaining to the transportation of hazardous materials is spread over several government departments and is the responsibility of all levels of government. Transportation of dangerous goods is regulated in terms of the National Road Traffic Act, 1996 and Chapter VIII of the National Road Traffic Regulations, 2000 and references to a range of SA National Standards (SANS) complied by SA Bureaus of Standards (SABS). Table 9-6 below, reflects a summary of each Act's general focus and the resultant imposed duty or responsibility on local authorities (District/Local Municipalities) for regulations on the transportation of dangerous goods.

Table 9-6: Legal Framework Summary

Act	General Focus	Local authority Responsibility
National Road Traffic Act, No 93 of 1996	Focus is on consignor, operator, and consignee.	No specific imposed duty or responsibility on local authority in whose jurisdiction transport takes place.
National Land Transport Act, No 4 of 2009	Act requires all planning authorities to develop freight transport strategies, specifically indicating freight routes to be used.	Local Authorities must develop freight transport strategy and identify routes for transportation of all dangerous goods.
Environmental Conservation Act, No 73 of 1989	Focuses on rehabilitation of environment after incidents and spillages.	Competent authority or local authority may direct a person responsible for causing harm to the environment to rectify or remedy situation at own cost.
Constitution of South Africa	Responsibility for Fire Services placed with Municipalities.	Municipalities must perform all fire and emergency rescue services in their areas of jurisdiction.
Hazardous Substances Act, No 15 of 1973	Focus is now mainly on classification after transfer of	No specific imposed duty or responsibility on local authority in whose jurisdiction transport takes place.

	certain control functions to the National Land Transport Act.	
Petroleum Products Act, No 120 of 1977	Promulgation of regulations on transport of petroleum products.	No specific imposed duty or responsibility on local authority in whose jurisdiction transport takes place.
Explosives Act, No 15 of 2003	Regulates transport of explosives.	No specific imposed duty or responsibility on local authority in whose jurisdiction transport takes place.
Disaster Management Act, No 57 of 2002	Manages various government bodies for disaster management.	Allows district municipality to create Municipal Disaster Management Advisory Forum. Every local municipality must prepare a Disaster Management Plan in which transport of dangerous goods must be included.
Fire Brigade Services Act, No 127 of 1987	Regulates the rendering of fire and rescue services.	Empowers local fire departments to make by-laws controlling transportation of dangerous good. They must follow SANS 1157 when issuing permits under these by-laws.

The Road Incident Management System is the coordinated and pre-planned use of human and electronic resources to manage incidents and restore traffic to normal conditions, which involves the monitoring of accidents, identification of hazardous locations, management of traffic at hazardous locations, and the implementation of law enforcement programmes. The demand of RIMS is increasing as a result of the rapid increase of traffic volumes, high accident rates, congestion, and the negative impact of incidents on the road system, giving rise to the need to determine a policy to guide the development and maintenance of RIMS across the country. Traffic law enforcement and communication will have to form an integral part of the provincial strategy to manage incidents, monitor and inspect the transportation of dangerous goods.

Mpumalanga province need to develop the strategy that will develop incident management plans for all road networks in the province that will align with NRTA, Act 93 of 1996. This incident plan will need to be monitored at the provincial level and executed on a corridor-basis.

9.10.1 Movements of Dangerous Goods Routes

There are no specific routes that are prescribed for dangerous or abnormal loads in Mpumalanga, according to the Mpumalanga Freight Transportation Plan (MFTP). This is problematic since these vehicles can be extremely heavy and accidents can block entire routes for some time, thus they should only travel on roads that are designed to carry heavy loads and have an action plan to deal with accidents involving dangerous load spills. Every municipality must determine dangerous goods routes designated for movement of hazardous substances in their areas according to the NLTA and in accordance with the 2016 minimum requirements for an ITP.

9.10.1.1 Strategic Movement of Dangerous Goods

In Mpumalanga there is a lack of specified HAZMAT routes, which is a major issue to road infrastructure and provides safety issues to road users and the surrounding community. The development of a strategy to address this issue and a policy framework to govern movements of HAZMAT is the critical aspect for provincial government, as indicated in the MFTP.

Municipalities should develop by-laws to restrict and direct movement of dangerous goods within their jurisdiction.

Proposed solutions for movement of Dangerous Goods

- Development of clear determination of routes designated for movement of dangerous goods.
- Development of by-laws at the municipality level to restrict and direct the movement of dangerous goods.
- Development of pass-by rules to prohibit dangerous good vehicles from using routes that pass through urban centres and settlements areas.
- Development of over-night stopovers designated and created for dangerous goods vehicles on a strategic dangerous good movement route.
- Traffic officers should undergo training for handling HAZMAT incidents.

9.10.1.2 Strategic Movement of Abnormal Loads

Mpumalanga province have a high rate of freight transportation due to mineral and agricultural products. Any outdated policy, strategies and frameworks addressing the freight and abnormal vehicles movement need to be updated in line with DPWRT and DoT planning. There are also no specific routes prescribed for movement of abnormal vehicles, as is the case with the movement of HAZMAT vehicles within the province.

Abnormal vehicles should only travel on roads that are designed to carry abnormal loads and have an action plan to deal with possible accidents.

Proposed solutions for movement of Abnormal Vehicles

- Development and updating of policies, strategies, and frameworks in line with current provincial boundaries and freight situation.
- The Government should develop policies that will empower TRAC (the N4 concessionaire) to manage the transportation of abnormal loads.
- Designing and development of routes that are prescribing the abnormal loads vehicles to utilise.

Along the N4, TRAC does not have specific policies in place regarding the transportation of abnormal or dangerous goods. However, there is Road Incident Management Strategy (RIMS) that makes provision for general accident response teams which respond to all incidents, including those affected by dangerous goods.

9.10.2 Safety Measures for Movements of Dangerous Goods

Transportation of dangerous goods by road networks involves the risk of traffic accidents. There is additional risk of an incident, such as spillage of the transported goods that can lead to hazards such as explosions and environmental pollution damage (ENVIROSURE). The safety measures that can be adhered to are:

- **Vehicles Affected:** the dangerous goods regulations must apply to all vehicles transporting dangerous goods, irrespective of the weight used to transport dangerous goods.
- **Vehicle Specifications:** dangerous goods transport must comply with safety specifications which are listed in SANS (1518 and 1157).
- **Fire Extinguishers:** all dangerous goods transport must have fire extinguishers with minimum requirements according to vehicle type. Mounted in an easily accessible quick realise bracket. In accordance with SANS 1457.
- **Operators:** Transport operators must register as dangerous goods operator and drivers must receive annual training by an approved dangerous goods training body.
- **Loading and Unloading:** this must be carried out by a qualified person trained in the relevant procedures and nominated by the transport operators, consignor, or consignee. They have responsibility to ensure that it is safe to proceed with loading and unloading.
- **Shipping Documents:** dangerous goods declaration documents describing the dangerous goods that are been transported and transport emergency cards should accompany the load for causes of Incident on public road, so the driver and emergency services are able to take appropriate action.
- **Designated Space:** For driver and emergency service personnel to be able to access quickly documents relevant to the load that is transported must be stored in designated space.
- **Placarding:** Vehicles carrying dangerous goods more than the exempt quantity must be placarded as prescribed in SANS 10232-1 for first responders to immediately identify the dangers associated with a particular cargo.
- **Event of Incident:** In the event of becoming aware of an incident, the incident report procedure must be followed.

Consultation should be held with municipalities to consider the movement of dangerous substances on their respective road networks, which should serve as input into the development of a Mpumalanga Provincial Road incident management strategy.

The District Municipalities should accommodate the transportation of hazardous goods through its jurisdiction by:

- Been equipped with an Incident Management System and protocols to respond to incidents involving hazardous goods.
- Developing the by-passes or detours for heavy vehicles and hazardous materials transport.
- Avoiding the transportation of hazardous goods through towns and sensitive areas.

- Evaluating route plans submitted by operators of hazardous transports.
- Placing Law enforcement in place that is knowledgeable with dangerous goods protocols and legislation to manage offenders and incidents involving hazardous materials.

Mpumalanga province can develop a good strategy that will promote safety and efficient movement of dangerous goods by introducing proper initiatives to address the movement of dangerous goods on their road networks, while protecting public health and the environment in Mpumalanga.

9.11 Intelligent Transport System Strategy

Intelligent Transport System (ITS) is the transport system that apply information technologies, communication, and control technologies to improve transport safety and efficiency operations of transport network. This tool improves the operation and management of a transport system that help operators and users to make better decisions. The core functions are information, communications, and integration. Relevant parties and structures should be involved to work together for development of ITS strategies in Mpumalanga.

ITS are systems that monitor and manage traffic flows on roads, highways, bridges, tunnels, and other transportation networks. They use various technologies and tools to collect, process, and communicate traffic information and control signals, such as:

- Vehicle detection sensors
- CCTV
- Variable Message Signs (VMS)
- Ramp meters
- Highway Advisory Radio (HAR)
- Road Weather Management Subsystems (RWMS)
- Software
- System telecommunications and in some cases centre to centre (C2C) communications



Figure 9-8: ITS systems

Traffic control systems and or ITS aim to improve traffic safety, efficiency, and mobility, as well as to reduce congestion, pollution, and accidents. They also coordinate with emergency services, public transport operators, and other stakeholders to respond to incidents and events that affect traffic:

- **Safety and Efficiency:** Traffic control systems focus on enhancing safety and efficiency on roadways. They monitor traffic conditions, identify bottlenecks, and take proactive measures to prevent accidents.
- **Congestion Management:** By analysing real-time data from cameras, sensors, and other sources, these centres can detect congestion and implement strategies to alleviate it. This might involve adjusting traffic signal timings, rerouting vehicles, or providing real-time information to drivers.
- **Pollution Reduction:** Efficient traffic management contributes to reduced emissions and pollution. By minimizing stop-and-go traffic and optimizing routes, traffic control centres help mitigate environmental impact.
- **Incident Response:** When accidents, breakdowns, or other incidents occur, these centres coordinate emergency services, tow trucks, and other responders. Their quick actions can minimize disruptions and ensure safety.
- **Public Transport Coordination:** Traffic control centres collaborate with public transport operators to synchronize bus and train schedules, prioritize transit lanes, and improve overall mobility.
- **Stakeholder Collaboration:** They work closely with various stakeholders, including law enforcement, local authorities, and transportation agencies. Communication and coordination are essential for effective traffic management.

Furthermore, Urban Traffic Control (UTC) is developed to form the fundamental analysis criteria. The UTC services available in South Africa are as follows:

- Dynamic Message Signs
- Internet Broadcast
- Area Control
- Scoot Control
- CCTV
- Remote Workstations
- Incident detection
- Red light violation
- Ramp metering
- Automated traffic counting
- Bus priority
- Weigh-in-motion
- Speed monitoring
- Integrated database
- GIS based libraries.
- Over Height detection
- Public Transport Information
- Parking and Demand Management
- Vehicle priority
- Navigation and pre-trip traveller information
- Traffic controls

In addition, Transport System Management is the ITS component objective to optimise the existing transportation infrastructure by initiating developments to improve the operation of the system. This can involve upgrades to intersections to optimise traffic flows, improvement of traffic calming methods, road signs, road infrastructure maintenance. Transport System Management are low cost, short term to medium term improvements to the existing transportation system to accommodate travel demand.

Optimisation for the following components can be done:

Traffic Signals

Updating the traffic counts help on updating the signal-timing plans for optimisation of the existing signals or upgrading to signals. There is a need to develop and to obtain updated traffic counts based on identified time periods at the major intersections to keep the signal timing updated with the recent traffic volumes. Additionally, signal synchronisation improves traffic flow. Adaptive traffic signals can also be considered, that can be adjusted based on the real-time traffic flow in urban areas.

In Mpumalanga there is a need to develop the program to maintain traffic signals in terms of maintenance and operations.

Road Signs

The road signs must be up-to-date and the areas with damaged road signs needs to be replaced or installed in accordance with the SADC Road Traffic Signs Manual. There is also a need to update the existing road signs to current standards, including road names, tourism signs, destinations, and regulatory signs.

Mpumalanga DPWRT need to have an implementation plan to upgrade the road signs through the road's projects span over the provincial implementation period plan. However, the developed plan for comprehensive the road sign upgrade project should be implemented for the District and Local Municipalities.

Urban Streets

In urban area congestion is the problem there is need for congestion management on urban streets. ITS can be effective in urban area which is beneficial for reducing congestion by optimising traffic flow and it will also improve the road safety for vehicles and pedestrians in Mpumalanga urban streets.

Heavy vehicles should not use the urban streets through towns mostly during peak hour to reduce congestion. Adequate parking, designation for loading zones, and during peak periods designated bus lanes must be provided.

ITS strategy in Mpumalanga urban area with high congestion problem such as eMalahleni and Mbombela can help in reducing congestion and improve traffic flow and control traffic flow efficiently.

Road Access Control and Management

Access control plays a crucial role in accessing restricted areas and managing the access to properties. During developing the Traffic Impact Studies access management should be addressed as new development can cause congestion on the urban streets that will be affected by the new traffic. TRH 26 South African Road Classification and Access Management Manual should be used to provide comprehensive plan for design of the access.

Parking

Traffic Impact Studies should specify the parking requirement for the new development based on the size and land use of the development. However, maximum number of provided parking space must be provided with respect to private vehicles supply to the new development.

Implementation of Intelligent Transport System Component Transport System Management can address key transport system challenges. However, ITS can enhance the key challenges by optimisation of the existing road infrastructure will create efficient and effective transport system in Mpumalanga. There is more to be done to optimize the transportation system especially given that there is more that the provincial transportation system requires and what has historically been committed to the sector.

As part of the CITP and DITP documents, travel demand management TDM, chapter 8 of the minimum requirements for the preparation of integrated transport plan 2016 require a strategic plan regarding TDM and ITS. In the coming update of the CITP and DITP documents for Mpumalanga, the Districts and Local municipalities should develop such plans guided by the information above and below.

9.12 Travel Demand Management Strategy

Travel Demand Management (TDM) is the strategic method developed to improve the transport system management by managing travel pattern and improving traffic flow by shifting to sustainable and effective transport mode. When the municipalities develop their ITPs, they must include a TDM strategy as it is detailed on Land Transport Act of 2009.

TDM method promote shifting to public transport and ride sharing to reduce congestion and emission. Analysing of the existing travelling pattern to develop the modal split so the key challenges and problem are identified.

9.12.1 TDM Strategy

TDM strategy is aimed to reducing the impact of travel by influencing people's travel behaviour. The strategy may include below methods:

- **Physical Infrastructure Measures:** Construct designated bus lanes, decrease parking supply.

- **Voluntary Measures:** Encourage travel changes through awareness that promote use of public transport and ridesharing.
- **Regulatory Measures:** Implement policy that force changes in travel patterns.
- **Pricing Measures:** Make private vehicle travelling cost high by using strategic high road user charges and parking rates high.
- **Intelligent Transport System:** ITS provide information on road congestion and strategies to improve transport system operations.

TDM strategies influence commuters to change their travel behaviour, such as the decision to make a trip, mode choice, trip timing and vehicle occupancy. TDM programmes incorporate a combination of strategies that are particularly suited to the population and area in which they are being implemented. They can be implemented for a wide range of areas, for example an entire city, a specific corridor, a small local area such as an industrial zone. Effective TDM programmes focus on smaller areas and are employer-based, they target specific businesses with the aim of employer's encouraging TDM programme execution.

The availability of alternative transport options, such as public transport, non-motorised transport (NMT) and ridesharing possibilities, are essential for the effective implementation of TDM strategies. TDM does not provide implementation of public transport or NMT systems, but it is important that effective and attractive alternative transport modes exist for TDM to be successful in changing travel behaviour to favour these modes.

Travel demand key challenges in Mpumalanga are:

- There is a need of an effective road transport network management structure for maintenance and operations of roads in Mpumalanga.
- There is lack of road infrastructure and public transport in rural areas.
- There is a serious shortage of Non-Motorized Transport infrastructure and facilities within the province.
- There is traffic congestion mainly in Mbombela and eMalahleni (Witbank) during peak hours.
- Lack of fences along roads network throughout the province, particularly in rural areas, leading to stray animals.
- The need for road safety awareness throughout the province.

9.12.2 TDM Study for Mpumalanga

This section discussed the benefits of TDM, which promote a safe road network for users by strategies to reduce congestion on road networks and promotion of public transport. This can help the province achieve its land transport goals and objectives of safer, efficient traffic flows, and good condition road infrastructure of transport system.

It is recommended that the comprehensive Travel Demand Management study for Different District and Local Municipalities be performed. Completion of the study will determine which TDM strategies are to be implemented that could significantly and positively influence the transport system for respective municipalities and city in Mpumalanga.

9.13 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 9-7: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Overload Control Policy and Strategy	x	x	x	
Coal Haulage Strategy		x	x	
6 Coal Road Rehabilitation Projects			x	
Freight Strategy and Implementation Plan			x	
9 Legislative Policy Projects			x	
4 Traffic Control Projects			x	
Develop Incident Management System for Province			x	

3 HAZMAT Projects			X	
5 Rail Freight Projects			X	X
6 Road Infrastructure Projects	X	X	X	X
2 Air Projects			X	X
2 Pipeline Projects				X
2 Institutional Projects			X	
Cross-border Strategy and Implementation Plan	X	X	X	X
Road to Rail Initiatives and Strategy			X	X
Dangerous Goods Movement Strategy	X	X	X	
Implementation of Intelligent Transport Systems & Strategy	X	X	X	
Develop TDM Strategy for ITP's	X	X	X	

This section adheres to objectives 1, 2, 4 and 5.

10 Chapter 10: Aviation Transport Strategy

10.1 Introduction

The previous PLTF did not have a specific chapter dealing with aviation transport in Mpumalanga. Aviation plays an important role in the economy of the province and it has been prioritised as a standalone chapter in the PLTF to provide a summary of the guidelines and policies that the Kruger Mpumalanga International Airport should align with and a summary of all the airports and airstrips in Mpumalanga is provided. A summary of steps to be followed for the Aviation Strategy is provided in this chapter.

10.2 Background

As part of the PLTF the aviation transport in the province was considered as part of the transport system in Mpumalanga. This includes the conditions of the infrastructure and operational strategy and future interventions in aviation transport. Mpumalanga have important economic sectors in tourism, agriculture, and the mining industry. The province is currently served by Kruger Mpumalanga International Airport (KMIA) as the main airport that serve the region to link to other national hubs in freight and passenger air transport. Mala Mala airfield also contribute towards aviation transport in the province. The old Nelspruit airport is also still in use for light aircraft operated to and from the City of Mbombela. There are other privately owned airfields that are supporting regional economic growth, as they are used to ferry equipment in or out of the province.

The aviation transport strategy should develop the road map of aviation in Mpumalanga by addressing the key issues and challenges encountered and develop the strategic plan to enhance connectivity of aviation transport with land transport to improve the competitiveness for tourism and as a provincial business destination.

10.3 Policy and Guidelines Requirement

The role of airports and airlines is to promote, regulate, and enforce best practice security measures and policies according to South African Civil Aviation Authority (SACAA). They must ensure that the aviation industry is compliant with the National Aviation Security Programme (NASP). This industry should align with International Civil Aviation Organisation standards to ensure safety and growth of air transport. The provincial government should work with SACAA and the municipalities for incentives for airport operators and for routes.

The airline and airports division compliance roles are:

- The development and planning of the airport should be in the PLTF, which should form part of the economic development plan of the province.
- Determine the systems inadequacies of the division to prevent acts of unlawful interference.
- Evaluate the robustness of the security of the airports.
- Recommend security measures to counter actual or perceived threats based on aviation authorities' standards.
- Airport security plan development should be planned in accordance with the needs of CAA, NASP, and ICAO and must be aligned with their standards.
- To determine deficiencies in security and suggest new requirements.
- Security liaison with other state organs.

Airports in Mpumalanga should adhere and comply with the guidelines and standards of the national and international aviation authorities.

10.3.1 Mpumalanga Provincial government role in Land and Aviation interface

The provincial government is responsible for the Land and Aviation transport according to NLTA 2009 are:

- Planning, coordination, and facilitating the land transportation operations within the provincial jurisdiction.
- Working with the municipalities to ensure planning, infrastructure, operations, services, and administration relating to land transport on the municipality level are running effective and efficiently.

- Engaging with other government departments in the national and provincial spheres with responsibilities related to land and aviation transport use planning issues and bringing together key parties for collaboration.

Mpumalanga DPWRT is looking at the planning structures that deals with the land and aviation interface with limited authority. Rail and airport planning is conducted by Transnet and ACSA where the province had little, or no involvement and provincial policy had to reactively include these plans.

10.4 Aviation Strategy

The purpose of aviation transport strategy aims to identify the needs of aviation transport in Mpumalanga and provide an implementation plan that will improve connectivity with regional and international routes. This development will also enhance the tourism experience in Mpumalanga either for passenger or freight aviation transportation. This strategy should develop the integration between Air and Land transport in Mpumalanga.

10.4.1 Aviation Infrastructure in Mpumalanga

The main commercial airport in Mpumalanga is the KMIA, which is utilised for both passenger and freight aviation. It is mostly used for domestic passenger flights with few international links. There are other airfields in the province that play minor roles in the aviation economic activities happening in the province. There are airstrips that are for private operations which they don't have adequate infrastructure for commercial operations. Table 10-1 below show some of the airports and airfield present in Mpumalanga.

Table 10-1: The Strategy overview by Airport/Airstrip

Location	Strategy	Description
Mbombela (Kruger Mpumalanga Int. Airport)	Enhancing its regional hub for commercial aircraft.	KMIA have all scheduled and non-scheduled passenger flights and freight flights, intervention required to develop this demand. Air freight developments requires significant attention from the government to be realistic.
Old Nelspruit Airport	Support aviation needs to KMIA (Phased strategy).	This is the smaller Nelspruit airport. The passenger aviation demand at Old Nelspruit airport is mainly private flights and small business flights. The airport require upgrades for destinations attraction of visitors and business.
Mala Mala Airstrip	Delayed catapulted take-off.	Mala-Mala contains a landing strip and safety regulations are not always adhered to. This airport is expected to continue as it is with limited passenger traffic in future to cause minimal disruption to local wildlife.
Barberton Airfield	Support tourism and local connectivity	It's only a landing strip which is not expected to grow much traffic in the short- or long-term plan. It is utilised mainly by private small planes.
Ermelo Airfield	Support local economic development and improve connectivity.	The passenger demand in Ermelo airfield is general aviation, such as private and charter flights. The upgrade of the airport is required to attract visitors. The delayed overarching strategy is required at this airfield.
Hazyview Airport	Support local economy by supporting the tourism growth.	Hazyview airstrip is mainly utilised for private and small charter flights, it also carter for small aircraft. The airport needs to develop the strategy for destination marketing and attract visitors.
Komatipoort Airport	Can support the cross-border trade and enhance connectivity with regional flights.	Komatipoort contains landing strips and safety regulations are not always followed. The airport has potential for passenger traffic and for strategic cross-border tourism and trade. The needs to develop feasibility study of commercial airport to assist growth in Komatipoort airport.
Malelane Airport	Grounded	Malelane airfield have no potential from a passenger or freight flights perspective. The airport itself requires

		attention in line with the SACAA standards. The airport is permanently closed.
Middelburg Airport	Delayed strategy.	The airport has two runways which is one gravel and one paved, the passenger aviation is mainly private charter and Stratos jet. The airfield requires upgrades to and development of the tourism destination, mainly in form of unscheduled flights.
Piet Retief Airport	Can strategical support be enhancing local economy	Piet Retief airfield contains only landing strip which is for local economy and transport network for private flights. Safety regulations are not always adhered to at such an airstrip.
Secunda Airport	Can strategically support the local economy and regional connectivity	Secunda airport is the industrial airstrip that has potential for both scheduled and non-scheduled passenger and freight flights, small to medium sized. Interventions are required to develop this demand. To accommodate more frequent traffic developments would require significant intervention from government to materialise.
Skukuza Airport	Support local economy by supporting the tourism growth.	This is a small airport in KNP which offer passenger flights for regional connectivity with Johannesburg and Cape Town. This airport is not expected to develop much in the short to medium term. It is operated by Airlink.
Witbank Airport	Can strategically support regional connectivity and air freight for industrial purpose. (Phased strategy)	Witbank airport is expected to grow to be important aviation hub for regional connectivity as the region is developing. It will open up opportunity to provide mining sector air freight and support passenger flights. Government intervention will be required to stimulate any aviation development.
Ngala Airfield	Support the tourism experience in the game reserve.	The existing privately activities airstrip is utilised for the tourism market. There is no potential from a passenger flights perspective.

10.4.1.1 Kruger Mpumalanga International Airport Infrastructure

KMIA is the port of entry in Mpumalanga province, the airport is an ICAO approved facility that support major domestic and regional passenger flights. The KMIA facility is shown in Figure 10-1.

The following airliners operate from KMIA facilities:

- Airlink Airlines
- Federal Airlines
- Airlink Cargo

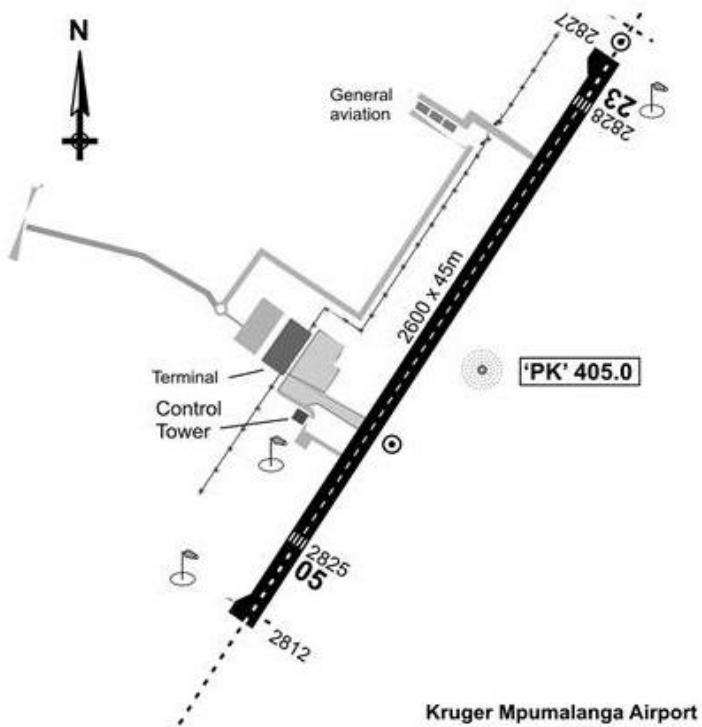


Figure 10-1: KMIA Infrastructure facility.

KMIA is currently the only airport for which air freight data was made available. There are several airfields within Mpumalanga where there is possibly air freight movement, but they are private.

10.4.2 Passenger and Freight Aviation Network

KMIA is currently the only institute where air freight data was made available. Other several airports in Mpumalanga with air freight movement the data was not available as they are private and kept confidentially.

10.4.2.1 Passenger Air Transport

The growth in passenger numbers using KMIA is being analysed in section 12.2.4 of this report.

10.4.2.2 Freight Air Transport

Domestic and regional destinations are served from KMIA by Airlink Cargo, with international air freight are served via other international airports in South Africa.

Airlink Cargo provides air freight transport across SADC regions and provide cargo connections within South Africa's domestic destination, also international air cargo destinations. Figure 10-2 below shows Airlink Cargo destination between South African Airports with Southern Africa countries.

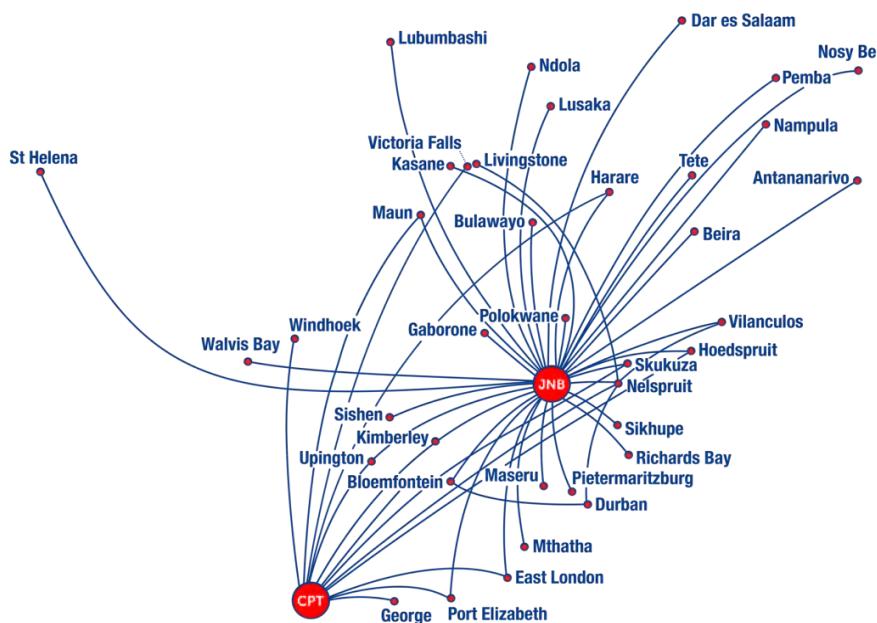


Figure 10-2: Airlink Cargo Destinations (Source: (Cargo, 2024))

Airlink Cargo Mpumalanga have regional destinations which connects KMIA to countries like:

- **Zambia** at Harry Mwaanga Nkumbula International Airport (formerly Livingstone Airport).
- **Mozambique** at Vilanculos Airport.

Domestic cargo from Mpumalanga are as follows:

- **Skukuza Airport** - connect with OR Tambo International Airport in Gauteng and Cape Town International Airport in Western Cape.
- **KMIA** - connect with OR Tambo International Airport in Gauteng, King Shaka International Airport, and Cape Town International Airport in Western Cape.

International Cargo are connected in OR Tambo International Airport with the Airports in Mpumalanga province.

According to (Cargo, 2024) Airlink Cargo provides air freight transport products and services such as:

- **General Cargo** which are day to day items.
- **Express Cargo** which is any form of goods or commodities that are including and not including perishable products and dangerous goods.
- **Vulnerable Cargo** which consists of various equipment or sensitive goods that need special attention and protection.
- **Dangerous Goods**, Airlink Cargo offers specialized distribution of dangerous goods while abiding with International Air Transport Association for shipping dangerous goods.
- **Compassionate Remains**, Airlink Cargo when transporting your loved ones in an urn or coffin, it must be safe for air transport and in accordance with the IATA standards.

10.4.3 Land and Aviation Transport Issues

The key issues related to land and aviation transport in Mpumalanga are identified listed below:

a. Infrastructure development

- There is a need for development of logistic hubs and intermodal facilities in Mpumalanga.
- Railway connection with the airport is needed, there are enough agricultural and mining commodities volume to support this development.

- Old Nelspruit airport is not expected to have high volume growth and has no significant cargo volume. It is only utilised by light aircraft.
- There is a need for expanding KMIA for growth of the passenger traffic volume due to tourism growth.

b. Air freight management and access

- Agricultural freight is transported by road freight to ORTIA for international air freight since KMIA does not have connectivity to its primary air freight markets.
- Air freight is low volume, high value commodities and unsuited for rail transport.
- Freight data is not available as there is no reliable sources for air freight data and also not always shared with ACSA.
- Aviation transport network development focuses primarily on routes that serve passenger needs first.

10.5 Strategic Development

a. Development of connectivity with Airports

Development of dedicated freight corridors and important intermodal logistic hubs that connect road and rail freight network to the Airport for Cargo movement. Mpumalanga should develop comprehensive freight network plan for appropriate modes of transport for all commodities including identification of freight corridors and nodes.

b. Development of Integrated Transport Planning

The provincial government should engage with relevant planning authorities to coordinate and align their transport planning investment with the provincial infrastructure. Collaboration can be created to investigate feasibility of specific infrastructure projects and freight transport initiatives with Mpumalanga.

c. Development of industries that can feed the aviation industry.

In Mpumalanga there is comparative agriculture production and mineral production compared to other provinces. Export of raw and processed agricultural products can improve the economic growth in the province, while also supplying local provincial demand. The development of agro-processing hubs will attract industries and the establishment of a perishables hub close to KMIA to facilitate airfreight exports.

Investigate the economic, social and environmental regional effect of the current provincial airport locations and the functional distribution of activities between the airport to align provincial development strategies with national plans.

In Mpumalanga, South Africa, Kruger Mpumalanga International Airport is situated 27 km northeast of Mbombela. It replaced the smaller Nelspruit Airport, and travellers visiting Kruger National Park are now served by it. Scheduled passenger flights are available to regional locations, other South African cities, Zambia(Livingstone), Mozambique(Vilanculos) and Zimbabwe(Victoria Falls).



Figure 10-3: KMIA as seen from the air.

Lanseria International Airport, Kruger Mpumalanga International Airport, and, to a lesser extent, Polokwane International Airport and Pietermaritzburg Airport have the highest passenger volumes among airports outside the ACSA(Airports Company South Africa) network, according to the National Airports Development Plan 2015, South Africa has at least 39 Code 3 and 4 runways (longer and wider runways), most of which are paved, and Kruger Mpumalanga International Airport is one. There are however capacity capabilities/constraints from the National Airports Development Plan 2015 which are listed below:

- Runway capacity can handle up to Code 4E (Wing span aircraft 36m up to but not including 52m and Outer main gear wheel span 9m up to but not including 14m)
- Limited aircraft parking (total of 13 parking bays), especially when charter aircraft must be accommodated for several days.
- No taxiway, therefore, the current airspace capacity at the airport is limited to 8 movements per hour.
- However, land provides scope for some expansions (e.g. parallel taxiway)

The airport infrastructure is a crucial component of the South African transportation system, according to the White Paper on National Civil Aviation Policy (NCAP 2014). The White Paper on National Civil Aviation Policy points out that the current aviation infrastructure funding is insufficient, despite the National Airports Development Plan 2015 indicating an existing Aviation Growth Fund to draw new airlines to KMIA (tourism focus) at the provincial level. A suitable financial strategy for various airport scenarios should be adopted in the future to finance airport expansion. The idea is that the national government shouldn't directly fund any of the airports it owns, but it is advised that provincial and municipal airports look into financial aid for airside capital projects linked to safety and security. Airports can impact provincial and municipal socio-economic growth, which makes it important to include them in government planning efforts. Aviation knows no borders.

The province and its municipalities should continue to prioritise their financial requirements based on their recognised needs, including aviation infrastructure requirements for the facilities they design, own, and operate. Partnerships at new and existing airports between the public and private sectors, as well as local and foreign investors, should be fostered at all levels of government. Strategies to increase private-sector participation in airport development funding should be encouraged. Therefore, the development strategies of all levels of government must be in sync with the development of airports.

10.6 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 10-2: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Aviation Strategy			x	

This chapter covers objectives 1 and 2.

11 Chapter 11: Safety and Security Strategy

11.1 Introduction

The national minimum requirements for preparing this chapter of the PLTF are primarily focused on addressing road-based accidents and emergencies. However, given the significance of rail safety and incident management in the province, it was considered appropriate to extend the chapter to include aspects of rail, despite it not being a provincial responsibility and falling under the jurisdiction of PRASA and the Railway Safety Regulator (RSR).

The purpose of this chapter is to provide the reader with a summary of the existing rail, scholar and road traffic safety and to provide interventions required to develop a safety and security strategy for the province. The operational factors influencing road safety together with strategic challenges experienced and an implementation action plan are included in the chapter. The chapter closes with objectives that should be considered in the safety and security strategy.

11.2 Rail Safety

11.2.1 Context and Responsibilities

PRASA is currently responsible for passenger rail planning, implementation, and operations in the Mpumalanga Province, however the Railway Safety Regulator is responsible for overseeing and promoting safe railway operations nationwide as the province government has no direct obligations for rail safety management, but should have interest in the safety of its residents. Commuter rail has failed from a security perspective over the past few years mainly, causing crimes such as vandalism and theft. According to Section 4 of the National Safety Regulator Act 2002 (Act No. 16 of 2002), the Rail Safety Regulator was created as a public organisation. By offering suitable assistance, oversight, and enforcement under the direction of an enabling regulatory framework, the Rail Safety Regulator operates internationally and encourages safe railway operations. Its key functions include:

- Issuing and managing safety permits;
- Conducting inspections and audits;
- Investigating railway accidents;
- Developing regulations, safety standards and related documents which form the basis of the regulatory regime; and
- Issuing notices of non-conformance and non-compliance and, in future, will impose penalties for non-compliance with the Act and safety standards adopted by the Board of Directors of the RSR.

11.2.2 Strategic Framework

Safety and security, whether experienced or perceived, have a detrimental impact on the use of rail services. When passengers don't feel safe, they are less likely to use the system. The national Rail Policy Green Paper anticipates that the government's commitment to rail revitalisation will necessitate aligning and expanding safety standards and regulations to support institutional and technological changes in the transport sector, particularly in rail settings. The Rail Safety Regulator aims to strengthen safety standards and regulations for rail transport, aligning with the government's overarching transportation vision.

11.2.3 Strategic Challenges such as crime and personal safety

11.2.3.1 Crime

The current crime situation in South Africa in general is a major challenge. The national rail policy green paper highlights safety and security concerns for passenger rail, including the impact of criminal actions. According to the NHTS 2022 crime contributes 2.9% to transport-related problems experienced by households in the Mpumalanga Province.

11.2.3.2 Personal Safety

Safety and security and the protection of travellers remains the most indispensable requirement to be complied with. Personal safety incidents are low during the 2022–2023 reporting year, according to the State of Safety Report 2022–2023. This is likely due to an alarming 74% drop in PRASA train km from 9.2 million to 2.4 million. In the 2022/23 reporting period, Personal safety on trains contributed 0,2%, Personal safety on stations contributed 0,9%, and Personal safety outside station platform area contributed 0,9%. This compares with 5% on trains, 5% at stations, and 2% outside the plate form area in the 2018/19 reporting period.

11.2.4 Operational Incidents

Train collision with pedestrians pose a significant challenge. This is most commonly caused by pedestrians attempting to cross the tracks illegally and/or being illegally present on rail services. According to the Railway Safety Regulator's (RSR) 'State of Safety Report 2023/2024', operational incidents increased by 12.82%. With the implementation of the Regulation on Notifiable Occurrences (RONO), operational occurrences increased by 36.17% in 2023/24, totalling 2,496 documented operational occurrences. During the 2023/24 period, they reported 352 (14%) of operational incidents in Mpumalanga Province. The occurrences were documented as follows:

- People Struck by Trains During Movement of Rolling Stock - 126
- Fires And Explosions - 697
- Collisions During Movement of Rolling Stock - 687
- Derailments During Movement of Rolling Stock - 278
- Spillage/Leakage, Explosion or Loss of Dangerous Goods - 71

11.2.5 Level Crossing Accidents

Level crossings represent one of the rail sector's biggest safety concerns. It brings pedestrians and motor vehicles together in a common space, increasing the risk of collisions between users and trains. It can be hazardous to both vehicles, pedestrians and rail equipment. According to the Railway Safety Regulator's (RSR) 'State of Safety Report' a total of 63 level crossing occurrences were recorded during the 2023/24 reporting period. The Level crossing occurrences resulted in 50 injuries and 6 fatalities during the 2023/24 reporting period. 19% of level crossing incidents during the 2023–2024 period was reported in the Mpumalanga.

11.2.6 National Policy Framework from the RSR Strategic outcome orientated goals report

The RSR plays a major role in guiding safety and security policies, guaranteeing operator compliance. The following major strategic aims and objectives are represented as outcomes in the RSR:

Table 11-1: Summary of Strategic goals, outcomes and objectives

Strategic goal (outcome)	Strategic objective	Objective statement
Risks in the railway landscape have been mitigated	Effective compliance with regulation	Conduct sufficient and effective audits and investigations to ensure operators comply with legislation as one of the key enablers to mitigate risks.
	Ensure continuous improvements in railway safety through innovation	Research and implement innovative techniques and methods to ensure continuous improvements in railway safety.
	Strengthen regulatory framework and approach	Develop regulatory tools and commands to direct enforcement, contribute towards the development of world-class safety regulatory legislation.

Railway safety effectively promoted	Cultivate and instal a culture of safety in the stakeholder environment	Drive education initiatives and effective communication towards improved compliance by operators to contribute to culture of safety.
	Inform stakeholders on state of safety in rail	Use the State of Safety report to increase public knowledge and guide stakeholders of the issues and challenges in the rail environment to increase safety awareness
New investments in rail infrastructure and technologies impact positively on railway safety	A process for RSR safety assurance of rail investment and technology changes	Guide industry investments and technology changes to ensure safety compliance and improvements
Sustainable institutional growth and development	Assure corporate sustainability and growth	Develop corporate institutional capabilities to ensure sustainability and to effectively manage organizational growth and development
	Guarantee effective resource management	Enable effective and efficient management of organizational resources to support the sustained growth and development of the RSR

11.2.7 Proposed Interventions

In general, passengers require assurance that they will be travelling in a comfortable and safe atmosphere. The difficulties in this environment are confirmed by references to general crime, crime on buses, trains, and MBTs, as well as criminality connected to some e-hailing services. The following interventions are proposed to ensure safety and security:

- Including continuous observation of rail-related safety and security events by subscribing to the quarterly and annual RSR State of Safety Reports.
- Coordinating security initiatives across the province to promote rail safety, including response and action plans to prevent vandalism.

11.3 Scholar Safety

11.3.1 Context and Responsibilities

The Department of Public Works, Roads and Transport (DPWRT) is committed to streamlining the provision of scholar transport safety in Mpumalanga and assisting the Department of Education in the promotion of safe access to education through an effective and efficient program. The scholar transport initiative has been identified as one of the focus areas for the National Council of Provinces where Mpumalanga delegates to the NCOP will engage government departments and other stakeholders on the provision of safe and reliable scholar transport in rural areas.

The policy statement outlines key principles of the scholar transport policy framework:

- The standard of service of scholar transport services must provide value for money spent by the Department.
- Scholar transport services must reasonably address user needs, including the needs of learners with disabilities.
- The scholar transport services must run according to the agreed schedule.

- Licensed public transport vehicles used must be roadworthy and safe. The security of the learners in the vehicles must be of the highest standard.
- The system and service must be reliable, effective and efficient. It must also meet the required service and safety standards.

11.3.2 Strategic Overview and mandate

The vision of a safe, secure crime and road crash-free Mpumalanga province with the mission to improve scholar safety and road traffic safety through mass mobilisation, oversee the performance of police and provide security services.

Section 6 (3) of the constitution mandates that each Province is entitled to:

- Monitor police conduct.
- Oversea the effectiveness and efficiency of the police service including receiving reports on the police service.
- Promote good relations between the police and the community.
- Assess the effectiveness of visible policing.
- Liaise with the Cabinet member responsible for policing with respect to crime and policing in the province.

11.3.3 Control Overloading

Overloading of school buses is a safety concern where the bulk of the province's contracts for scholar transport are awarded to businesspeople from outside the province. To control the overloading and safety of scholars more local transport operators must be empowered and local people should be prioritised and not just benefit foreigners and people outside the province.

11.3.4 Road Safety School Programmes

The Department of Transport and the Department of Education have emphasized the need for a long-term road safety strategy that will include road safety education. Children and young people have a high involvement in road crashes, so they must learn to use the road safely. Receiving road safety education as part of their normal school curriculum is recognized as being one of the most effective ways of providing youngsters with road safety knowledge. Road safety education develops knowledge, skills, attitudes and even more importantly - values that enable pedestrians, cyclists, motorcyclists, drivers and passengers to use the road safely. The Road Traffic Management Corporation has been tasked with providing road safety education.

11.4 Road Traffic Safety

11.4.1 Safely Home Strategy

The Safely Home Strategy is grounded in "The 4 E's Strategy," which is recognized as international best practice. This strategy includes rigorous enforcement, targeted education and public relations efforts aimed at the most vulnerable road users, low-cost engineering solutions, and continuous evaluation to ensure an intelligence-based approach, with regular assessments to optimize resource use.

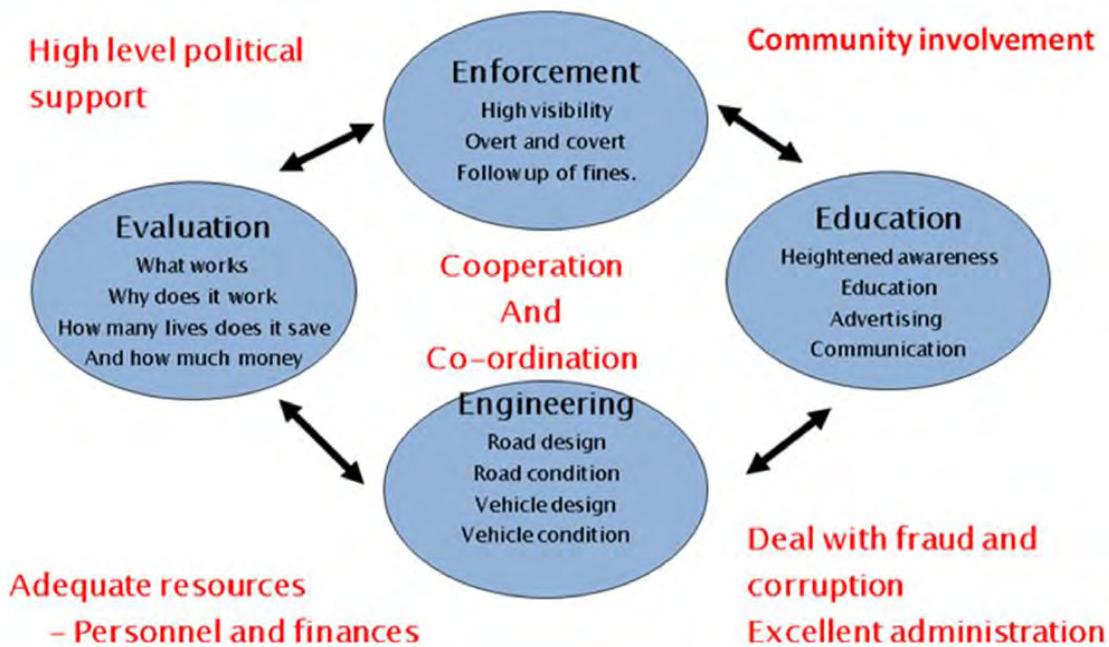


Figure 11-1: The Conceptual 4 "E" Strategy

To effectively address traffic safety issues, it is crucial to integrate the functional responsibilities of each of these disciplines. An integrated traffic safety management process can be described as a repetitive process, guided by an information system that tracks the identity and performance of officials and equipment, as well as the results of detailed action plans designed for optimal resource utilization toward a predefined goal.

The most affected road users will be the focus of this strategy's strict enforcement, affordable engineering solutions, focused education and public relations campaigns, and ongoing evaluation to guarantee an intelligence-based approach with frequent assessments to maximise resource utilisation.

Integrating the operational duties of each of these professions is essential to addressing traffic safety issues in an effective manner. An information system that monitors the identity and performance of officials and equipment, as well as the outcomes of comprehensive action plans created for the best possible use of resources in pursuit of a predetermined objective, can be used to guide the repetitive process of integrated traffic safety management.

The Integrated Traffic Management System relies on, among other things, an information data warehouse that stores available data. This data warehouse should enable the generation of reports necessary to support the system. According to the NLTA and NRTA, the province is required to develop a Land Transport Information System. An Integrated Traffic Management Information System logically follows from the existing but uncoordinated data, providing a platform to centralize and manage this information.

11.4.2 Safe System Approach

The Safe Systems Approach is considered a leading "best" practice in road safety management. This approach builds upon existing road safety measures but redefines how road safety is perceived and managed within the community. It takes an integrated approach, addressing all elements of the road transport system with the goal of keeping crash energy levels below those that would cause fatal or serious injuries. This approach requires the acceptance of shared responsibilities and accountability between system designers and road users. It also encourages the development of innovative interventions and new partnerships necessary to achieve ambitious long-term goals.

Traffic safety promotion is a shared responsibility across four main disciplines:

- Traffic law enforcement,
- Traffic safety education,

- Roads and traffic engineering, and
- Logistics.

Addressing traffic safety issues successfully requires integrating the functional duties of each of these professions. An information system that monitors the identity and performance of officials and equipment, as well as the results of comprehensive action plans meant to maximise resource utilisation towards a predetermined objective, is the driving force behind an ongoing, iterative process known as Integrated Traffic Safety Management as discussed above.

The information that is already available but unorganised makes sense as a follow-up to an Integrated Traffic Management information system.

11.4.3 Strategy Identification and Optimisation

This will be done through comparative subset analysis of crash and prosecution data, as well as sensitivity analysis of the outcome of a strategy in accordance with the amount of funding made available for the implementation of the strategy.

Political and practical circumstances should be considered, as well as available budgets and marginal returns on the investment of funding in the specific strategy. In other words, will the outcome substantially differ if R800 000 is spent on breath alcohol apparatus instead of R1 million?

11.5 Operational Incidents

Factors contribute to school transportation accidents, including human error, inadequate infrastructure and vehicle defects. Human factors, such as speeding, drinking and driving, and reckless and destructive driving are among the primary causes. Additionally, fatigue and lack of sleep impair driver judgment and reaction times, increasing the likelihood of accidents.

The R573 national road is popularly known as Moloto Road. The Moloto Road has the highest number of road traffic accidents in Mpumalanga Province. Moloto Road is situated in the Nkangala Region of the Mpumalanga Province. The Moloto Road connects the employment destinations within the Tshwane Metropolitan areas with rural communities situated in the Thembisile Hani and the Dr JS Moroka Municipalities of the Nkangala District of Mpumalanga province. The route is also along the route of Kwamhlanga Secondary School, Vezubuhle Secondary School, Bongumusa Secondary School, Nansindlela School and Kwandebele Science Combined School.

There are busses, taxis which transport people to and from Gauteng, trucks, delivery and private vehicles which are effectively using the road. According to the Mpumalanga Department of Community Safety, Security and Liaison 90% of road traffic accidents are because of human error. This means that drivers are liable for road traffic accidents rather than the un-roadworthy vehicles and the condition of the road. Reckless driving and high speed are mostly caused by drivers who drive under the influence of alcohol.

11.5.1 Human Factors

The human factor in road traffic accidents refers to accidents caused by humans or human error. This includes speeding, drunk driving, fatigue, driver distraction, and reckless driving. On the Moloto Road, 90% of all road traffic accidents are caused by human factors.

11.5.2 Speeding

Speed is a significant risk factor for road traffic injuries. As average traffic speed increases, the likelihood of a crash also rises. In the event of a crash, the risk of death and serious injury is higher at greater speeds because the time available to avoid a collision or stop the vehicle is reduced. Additionally, the driver's ability to safely navigate curves or avoid obstacles on the road is diminished at higher speeds.

Many single-vehicle run-off-road accidents occur in rural areas, where there are traffic restrictions. In order to resolve this issue, traffic officials should always be highly visible on the road and the speed limits should be lowered. It is also possible to apply this scenario to the Moloto Road.

11.5.3 Drinking and Driving

Road users impaired by alcohol face a significantly higher risk of driving recklessly and being involved in a crash due to impaired vision, reduced hearing ability, and slowed reaction times. The impact of such crashes extends beyond the individuals involved; infrastructure can be damaged, families suffer from the loss of loved ones, and traffic slows down due to road closures while the crash is being attended to.

World Health Organisation says that there is much evidence that shows that alcohol consumption by road users is a primary reason for road traffic accidents because the tests are normally done after the accidents. A person who exceeds the limit of alcohol consumption is affected by alcohol and may be physically unable to drive a motor vehicle.

11.5.4 Reckless Driving and Fatigue

Reckless driving is defined as "when an offender curiously disregards the risk of harm of which the offender is aware, World Health Organisation further says that recklessness is the same as negligence which the courts classify as a criminal offence.

One cannot differentiate between sleepiness, tiredness, drowsiness and fatigue as they can be used interchangeably. Fatigue makes us unaware of what is happening on the road and stands in the way of our ability to respond quickly and safely to the dangerous situation ahead. This causes unsafe travelling for scholars on school buses where the bus drivers are overworked and travelling long distances. Fatigue of drivers is not the only reason for sleepiness but general health, alcohol, drugs medicines and illness can also be the reason behind the tiredness of a driver and they further say that sleep-related road traffic accidents become more dangerous because of the high speed and the driver who cannot take some avoiding actions.

People driving on the Moloto Road mostly come from as far as Polokwane and further and chances are that they are tired and sleepy because they have had a long journey. It is difficult to identify a road traffic accident which happened because of fatigue, and it is not normally reported as the reason behind the road traffic accident.

11.5.5 Destructive Driving

Destructive driving is an act of driving while engaged in other activities such as cell phones are distractors for many drivers. Distractions are among the major reasons for most of the road traffic accidents and road users are not adhering to the laws of the country. On the Moloto Road, the usage of cell phones is also major challenge and account for the bigger number of road traffic accidents.

11.6 Key Strategic Challenges

The following key current challenges pertaining to safety and security have been identified that need to frame the Provincial Land Transport Framework (PLTF) response to safety and security:

- The road accident statistics reflected a long-term declining trend, but more recently there has been an alarming increase in road fatalities, with pedestrian fatalities being unacceptably high,
- Ongoing conflict and unrest within the transport industry compromises passenger safety, particularly relating to tension around the control of routes and ranks between rival associations,
- Lack of general compliance in terms of vehicle registration, fitness and abeyance of traffic rules. Of particular concern is the continued occurrence of drunk driving and speeding which are major contributing factors to serious accidents,

11.7 Implementation Action Plan

Short-term interventions, in parallel with the Land Transport Safety System implementation, will address matters such as those relating to:

- In conjunction with the establishment of the Land Transport Safety System, short-term interventions will address issues like those related to:
- Road context
 - Ineffective road safety management,
 - Unsafe road user behaviour (pedestrian/driver/passenger),

- Unsafe vehicles,
- Unfit drivers,
- Ineffective Law Enforcement and Compliance Management.

In the context of the points above, elements of an implementation plan are proposed briefly in the table below, highlighting key objectives and corresponding actions:

Table 11-1: Elements of an Implementation Plan

Objective Set	Proposed Key Actions
Integrated effective safety management	<ul style="list-style-type: none"> • Province to participate in a joint coordination, planning and monitoring structure for school bus transportation: <ul style="list-style-type: none"> ○ Participation in safety planning within the province ○ Access to safe information to enable effective monitoring. • Effective alignment of safety and security programmes • Centralised data and intelligence system on the road • Increased resourcing to address safety challenges.
Unsafe user behaviour	<ul style="list-style-type: none"> • Education for road users regarding safe and compliant driving, including: <ul style="list-style-type: none"> ○ Rules of the road and safe driving skills i.e. following distances ○ Rules and dangers of road crossings • Transport safety education campaign to support the agreed ethos and priority problems i.e.: <ul style="list-style-type: none"> ○ Drinking and driving ○ Safe road crossing ○ Speeding • Prioritise pedestrian safety e.g.: <ul style="list-style-type: none"> ○ Fencing of road reserves ○ Protection at road works • Incorporate safety programmes in schools
Non-compliant and unsafe behaviour	<ul style="list-style-type: none"> • Explore greater use of technology to assist in enforcement e.g.: <ul style="list-style-type: none"> ○ Ave speed cameras ○ Alcohol blood testing ○ Surveillance alarms • More visible law enforcement • Improvements to the legal (court) processes <ul style="list-style-type: none"> ○ Rollout of more dedicated courts • Communication with targeted messages and awareness campaigns
Unsafe vehicles and infrastructure	<ul style="list-style-type: none"> • Stronger enforcement and compliance e.g.: <ul style="list-style-type: none"> ○ Testing centres ○ Resourced compliance monitoring (mobility) • Ensure all road crossing signage and operations are compliant on an ongoing basis. • Repair fencing along road reserves
Objective Set	Proposed Key Actions
Unfit drivers	<ul style="list-style-type: none"> • Address corruption at driving testing and licence centres lobby the national government for legislation for driving schools. • Revisit and improve (expand) school driver programmes

11.8 Strategy Framework

Land transport safety should be viewed holistically by the Municipality in order to encompass all modes of transportation. It is imperative that the province monitor school bus route safety on an ongoing basis and foster a closer working relationship with the Department of Public Works, Roads, and Transportation. The following key objectives should be considered in the Provincial Land Transport

Framework (PLTF) to address the deficiencies in safety and security:

- Expand public transport safety initiatives in terms of a comprehensive Transport Safety Plan, encompassing the elements of compliance, enforcement, education and awareness,
- Expand on the existing provincial incident management plan in conjunction with all stakeholders to include all transport modes,
- Promote safety through developing a closer working relationship with the Department of Public Works, Roads, and Transport and undertaking joint safety projects and initiatives.

11.9 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 11-2: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Public Transport Safety and Security Strategy	x	x	x	
Scholar Safety Strategy	x	x	x	
Road Traffic Safety Strategy	x	x	x	

This chapter covers objectives 1, 2, 3 and 5.

12 Chapter 12: Tourism Transport Strategy

1.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Tourism Transport Strategy Chapter are defined as follows:

- a) *Contain a comprehensive strategy dealing with the transportation needs of tourists, as well as policies and standards for tourist transport services in the province.*

The purpose of this chapter is to provide a summary of the tourism strategy, including the tourism potential and the tourism routes in the Province. The existing tourism strategy does not address access transport to tourism and it is therefore addressed in this chapter.

12.1 Background

The Mpumalanga Tourism Growth Strategy document has been completed in 2007 but is still in use to provide direction to tourism policy in the province. As such, it is important to take cognisance of this document in the PLTF and to identify transport policies and transport projects that underpin the Tourism Growth Strategy as one of the economic pillars of the province.

The document starts with the following introduction:

"Mpumalanga has the potential to be a premier international and domestic tourism destination. By any standards it is an exceptionally beautiful and interesting Province, aptly named 'the land of the rising sun' – the scenery is different, the climate is different, and the ambience is different. Although relatively small geographically, Mpumalanga possesses a wealth of natural resources which include the world-renowned Kruger National Park with its diversity of wildlife, the world's 3rd largest canyon – Blyde River Canyon, breath-taking vistas from the Bulembu Mountains, a diversity of flora and the world's oldest exposed rocks in Barberton, Wetlands and much more."

The Provincial Government wishes to develop the tourism sector as a driver of economic activity and diversification. The Mpumalanga Provincial Growth & Development Strategy (PGDS) has established tourism as a priority sector as the province has the natural and cultural resource base upon which to develop a sustainable industry on the one hand and on the other, take advantage of the expanding markets for international and domestic travel.

However, the Provincial Government is aware that the realisation of the province's tourism potential will not just simply happen. Tourism development will require stimulation and change."

12.2 Tourism Strategy for Growth

It is clearly stated in the Tourism Strategy for growth that growth is only achieved if there are:

- More visitors;
- Visitors stay longer; and
- Visitors increase expenditure per person on average.

It is also stated that scenic beauty and natural resources can only provide the primary factor driven tourism economy, but from there on all further growth is investment driven.

These are depicted in the two diagrams below:

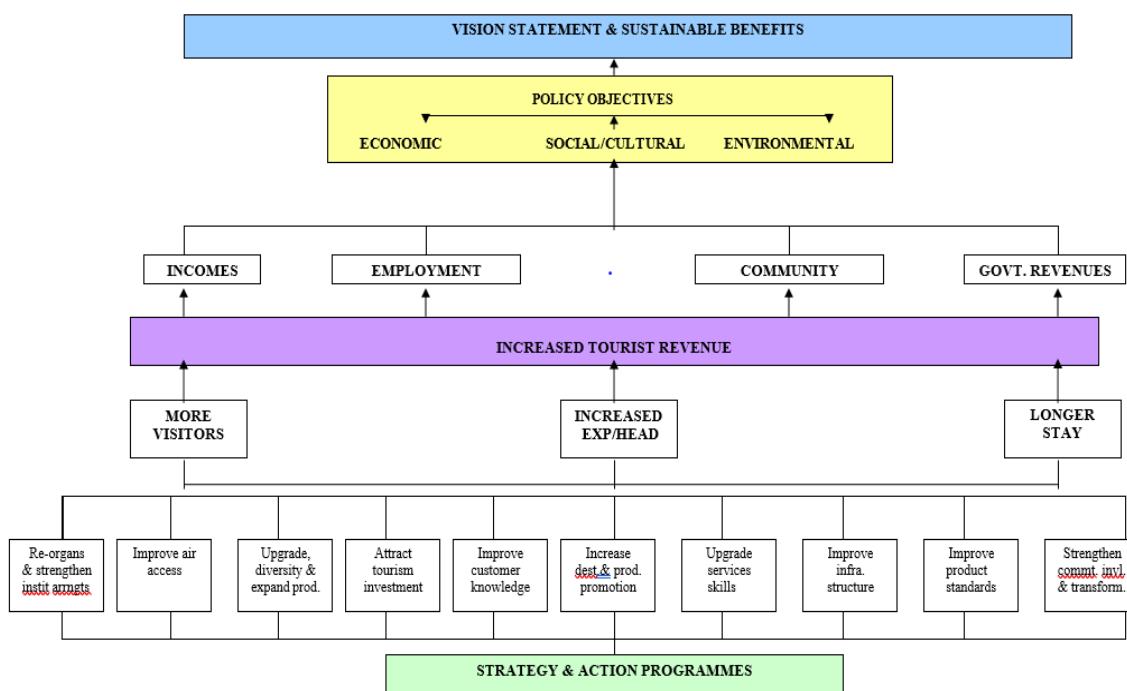


Figure 12-12-1: Tourism Growth Strategy Process

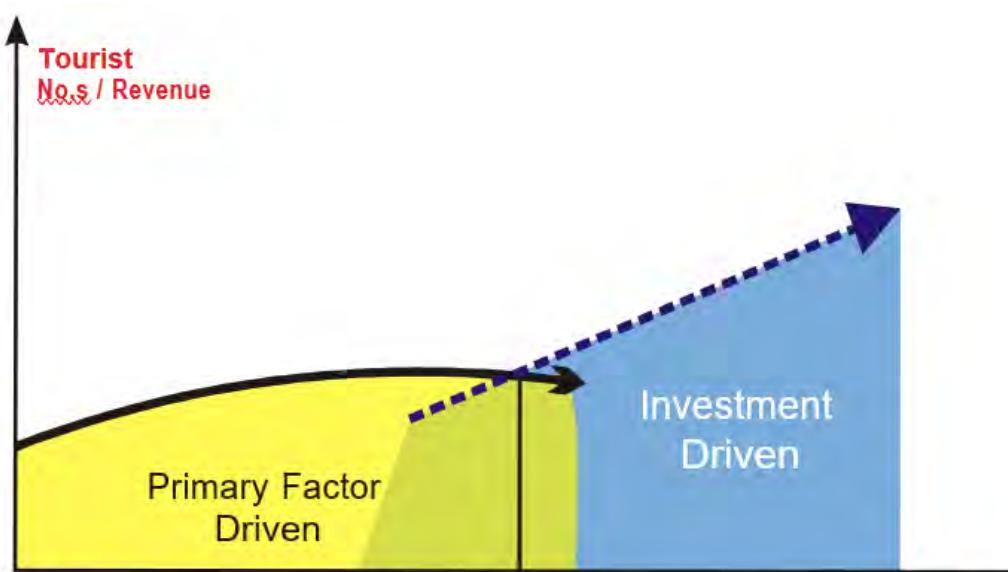


Figure 12-12-2: Tourism Development process

1.2 Tourism Potential

1.2.1 Tourism to be an Economic Driver

At the time of the development of the Tourism Growth Strategy the major issue was the extent to which the supply of the province's tourism product could be expanded and diversified. An indicative assessment was undertaken of what the market wants, correlated with what Mpumalanga can realistically supply in terms of product development. The analysis demonstrated that Mpumalanga's tourism product can be diversified and expanded to cover a wide range of product market segments.

With foresight the Provincial Government and District Municipalities encouraged the upgrading, diversification and expansion of the tourism product. This has resulted in a more balanced spatial spread of tourism development and associated benefits through the province.

Areas which have attracted major developments are:

- Kruger National Park and adjacent private reserves.
- Blyde River Canyon and other reserves managed by MTPA.
- Mbombela/ White River
- Barberton
- Sabie/ Hazyview
- Pilgrim's Rest/ Graskop
- Dullstroom
- Emalahleni
- Wakkerstroom
- Loskop
- Samara Machel Monument

The following important tourism routes have been identified in the Tourism Growth Strategy as detailed in the figure below:



Figure 12-12-3: Location of Tourist Generators

The following three examples of investments and potential investments that can grow the tourism industry are also indicative of the importance of transportation in the development of tourism:

1.2.2 Mbombela Stadium

Although not mentioned in the Tourism Growth Strategy, the Mbombela multi-purpose stadium that was constructed for the 2010 Soccer World Cup Tournament has been the catalyst for huge numbers of tourists visiting Mbombela regularly, for events as widespread as local soccer and rugby matches, national matches of Bafana Bafana and the Springboks, as well as arts festivals such as the annual "Innie Bos".

The stadium is depicted below:



Obviously, public transport services to and from the stadium during events is of the utmost importance to utilise the facility properly, as well as easy access for private vehicles. The provincial transport authorities and police should as a matter of policy, closely work with the stadium management and the local municipality to facilitate these actions as seamlessly as possible.

1.2.3 Railway Tourism

At the time of writing PRASA is in the process of curtailing most of its long-distance passenger rail services and it is not envisaged that any such service to or through the Province of Mpumalanga will remain.

This is unfortunate, as Mpumalanga has some of the most scenic stretches of rail lines in the country. These are:

- Belfast to Komatipoort (especially the section around Waterval Boven)
- Kaapmuiden to Hazyview
- Kaapmuiden to Barberton (branch line)

Fortunately, there are private sector companies that do offer railway excursions in the tourism space. One such company is ROVOS Rail, who at the time of writing offered a service along the route as detailed below:



Figure 12-12-4: ROVOS Rail Route for its Golf Safari excursion

As part of the itinerary, both Malelane and Dullstroom were visited, but surely there are many more possibilities for offering Mpumalanga hospitality, should the provincial tourism and transport authorities, as well as the relevant local authorities, work with the service provider to upgrade facilities, such as stations on the scenic rail lines.

As can be seen from the pictures below, ROVOS Rail is a luxury rail service provider, and its passengers are certainly worth having as tourists in Mpumalanga.







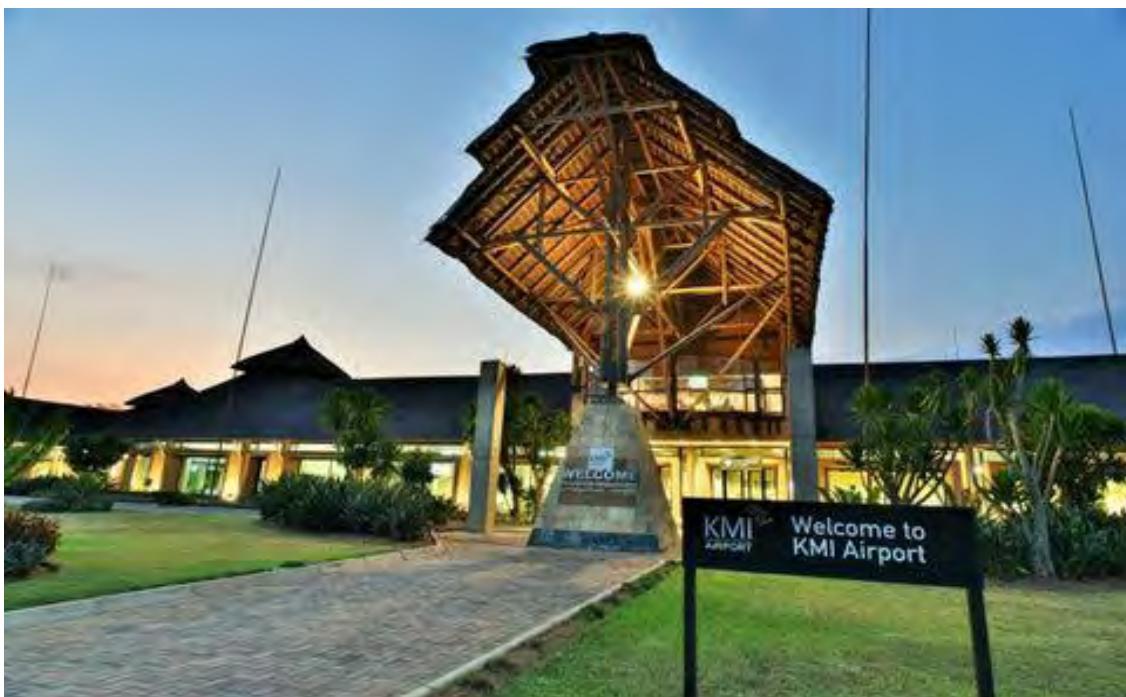
1.2.4 Kruger Mpumalanga Airport

KMIA is the official port of entry of Mpumalanga, situated in the heart of the lowveld (23 km's from Nelspruit and 14 km's from White River), in close proximity to many scenic, heritage and conservation sites. The famous Kruger National Park is a mere 30-minute car drive from the airport. KMIA is also commonly referred to as "Kruger Airport" in the aviation and tourism industry.

KMIA is an ICAO approved International Airport, with a runway of 3,100m x 60m, that can accommodate Boeing 737,747,767 and Airbus series. Domestic passenger volumes show a steady rise mainly from the other major domestic airports, namely Cape Town, Durban, Johannesburg and Lanseria. KMIA presently handles 32 scheduled and an average of 21 non-scheduled movements daily, with upwards of 25 000 pairs of feet moving through KMIA each month.

KMIA also offers the potential for the development of large airline cargo handling. Recently it has seen a concerted effort by business and government to explore this initiative, which is receiving priority. It is expected that cargo could easily outstrip passenger volumes in the near future. Since opening its doors for business, KMIA has seen a steady growth in volumes and brand awareness.

The airport is certainly tourism friendly as can be ascertained from the pictures below:





As can be ascertained from the graph below, the monthly passengers visiting Mpumalanga through KMIA is steadily increasing, even after the dark days of the COVID pandemic of 2020, passenger numbers have for the first time exceeded pre-covid numbers in 2024. In fact, since its opening in 2003 annual passenger numbers have more than doubled, making the airport the most important investment in the tourism industry in Mpumalanga.

New airlines are showing an increasing interest to fly to KMIA, while existing airlines are looking at expanding their present schedules to accommodate passenger demands. KMIA is the international gateway to Mpumalanga with direct access to the world-renowned Kruger National Park and world-famous private game lodges in the greater Kruger.

The Kruger National Park is the essence of the Mpumalanga region. Visitors to this famous wildlife sanctuary are overwhelmed by the experience of spotting and observing wild animals in their natural habitat of bush and subtropical vegetation, set in fertile valleys and majestic mountains. The Kruger National Park has a rich biodiversity of mammals, birds, reptiles, amphibians, plants, flowers and 380 species of trees.

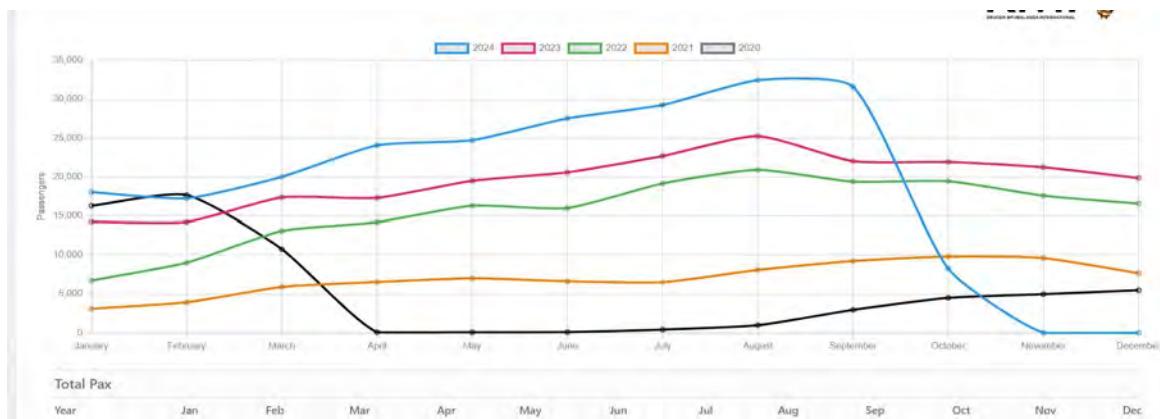


Figure 12-12-5: Monthly Passengers KMIA

12.3 Access Transport

12.3.1 Access Transport Survey

During the compilation of the Tourism Growth Strategy report a sample survey of visitors to the Mbombela Local Municipality resulted in the following model split:

- 65% own car.
- 10% rented car.
- 10% taxi.
- 9% tour bus/ coach
- 4% air transport
- 1% train
- 1% motorcycle

The survey was conducted too long ago to be of any value in 2024, but it does indicate road-based transport was and probably still is, by far the most important mode of transport by which tourists access the tourism destinations and facilities in the province.

12.3.2 Access Roads

The provision of well-maintained access roads to the places of interest throughout the province is still the most important responsibility of the various roads' authorities from SANRAL to the Mpumalanga Province to the specific local authorities.

The following figure depict the most important SANRAL and municipal tourism routes:



Figure 12-12-6: Tourism Roads

12.4 Summary and Conclusions

The Tourism Growth Strategy has indicated that natural resources and scenic landscapes can only provide a basic tourism demand for the Mpumalanga Province. In order to grow the tourism industry substantially, however, requires substantial investments and dedicated management and maintenance of tourism related infrastructure from both the public and private sectors.

The most important tourism-related transport infrastructure elements in the province are the following:

- Access roads (paved and gravel) under the jurisdiction of SANRAL, the Mpumalanga Province, as well as the local authorities to all the tourist destinations in the province.
- Mbombela Stadium
- Kruger Mpumalanga International Airport
- Station Infrastructure and tourism facilities along all the scenic rail lines in the province.

12.5 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 12-1: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Provision of well maintained access roads	x	x	x	x

This chapter covers objectives 1 and 2.

13 Chapter 13: Funding and Budget

13.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Funding and budget Chapter are defined as follows:

All actions identified in the different transport strategies must be subject to a process of prioritisation and allocation of funds. This chapter must at least include-

- a) A summary of prioritized provincial transport planning and implementation projects and the budgets for each.
- b) A summary of prioritized transport planning and implementation projects taken from integrated transport plans and the budgets for each, listing only projects of provincial significance or to which the province contributes financially.
- c) A financial programme showing expected sources of revenue and estimates of expenditure arising out of the preparation, implementation and operation of the different transport strategies over the five year period in which the plan is to be implemented. Budgets must be aligned with general government budget cycles such as Medium Term Expenditure Framework cycles and include funding sources and expenditures relating to:
 - i. The preparation of the Provincial Land Transport Framework (PLTF) and integrated transport plans in the province;
 - ii. Subsidies for road-based public transport that falls within the responsibility of the province and a summary of those shown in integrated transport plans;
 - iii. Monitoring of public transport contracts;
 - iv. Provincial roads and other infrastructure;
 - v. Assistance to special categories of passengers;
 - vi. Provision and maintenance of infrastructure and facilities; and
 - vii. Institutional arrangements.
- d) Perceived gaps or shortfalls in those funding sources.
- e) A description and programme of provincially funded projects and all short and medium term strategies and action plans to implement the Provincial Land Transport Framework.
- f) A summary in tabular form indicating target dates, milestones and development periods.
- g) A summary of financial programmes in tabular form as indicated in the Schedule of these Regulations.

The requirements for the Funding Chapter can thus be summarised as such:

- List and define all the planning and implementation projects of a provincial significance and the costing for each.
- List and define the budgets for the provincial departments that are responsible for the implementation of these projects.

The purpose of this chapter is to list and define all the planning and implementation projects of a provincial significance and the cost for each as well as to list and define the budgets for the provincial departments that are responsible for the implementation of these projects. The various funding sources are described in this chapter as well.

13.2 Background

In general, funding sources for the transportation sector in South Africa are severely limited especially in the provincial sphere of government (and its constituent municipalities). Provincial governments receive annual grant transfers from national treasury. In terms of existing legislation provinces have very limited opportunities to raise funds from other sources. Although taxation is a fundamental source for transportation, only a limited portion actually benefits the transport sector. This adversely affects the ability of the provinces to effectively discharge their responsibility in terms of transportation service delivery. Planning authorities in the province are faced with demands for transportation infrastructure and services that far exceed available resources.

13.3 Institutional Background

13.3.1 National Land Transport Act

In the National Land Transport Act 5 of 2009, the following is stated in terms of funding:

CHAPTER 3

FUNDING ARRANGEMENTS FOR LAND TRANSPORT

Municipal land transport funds

27. (1) Subject to subsection (2), every municipality that is establishing an integrated public transport network must establish a fund for its area known as a Municipal Land Transport Fund, into which shall be paid—

- (a) money appropriated by the Minister for that Fund;
- (b) money appropriated by the MEC for that Fund;
- (c) user charges collected in terms of section 28;
- (d) interest on invested cash balances belonging to that Fund; and

- (e) donations and contributions to that fund from any other source, including foreign aid agencies.

(2) Such municipality must administer that fund and use it to defray the cost of the functions of that authority in terms of this Act or its integrated transport plan, and to cover any other expenditure that will promote the objects of this Act in its area.

(3) Such a municipality may invest money in that fund that is not immediately required by it subject to the Municipal Finance Management Act and any other applicable legislation.

(4) Such a municipality must keep proper accounts of all money accruing to or paid out of that fund, which must be audited by the Auditor-General.

(5) The municipal manager or chief executive officer of such a municipality must submit, annually to its council, for approval estimates of expenditure to be defrayed from that fund, and may make no payment from that fund except in accordance with such estimates or with the prior approval of that council.

(6) The provisions of the Municipal Finance Management Act apply to such funds, and the Minister of Finance may make regulations clarifying the application of that Act to those funds.

Public transport user charges

28. (1) Subject to the Municipal Fiscal Powers and Functions Act, 2007 (Act No. 12 of 2007), a municipality, which has established a municipal land transport fund under section 27 may impose user charges, which may differ from case to case, on—

- (a) specified classes of motor vehicles entering specified portions of its area at specified times;
- (b) land, buildings or other developments that generate the movement of passengers, including land or buildings of which the State is the owner, in its area; and
- (c) the parking of motor vehicles in a building or on land in specified portions of its area;
- (d) parking places for, or the use of ranks, stops and terminals by, motor vehicles in such portions.

(2) Amounts received in terms of subsection (1) accrue to such fund.

Minister may provide funds for land transport

29. (1) For the performance of the Minister's functions in terms of this Act and to meet the expenditure incurred by the Department in the performance of work arising from or otherwise connected with those functions, the Minister must use monies appropriated by Parliament for that purpose.

(2) The moneys made available to municipal transport funds by the Minister are to be applied so as to give effect to land transport policy and to achieve the objects and purposes of this Act, and the Minister may for that purpose impose conditions including conditions relating to specific purposes for which the money is to be used.

(3) Money made available in terms of this Act—

- (a) for use for a particular or specified purpose, may not be used for any other purpose; or
- (b) subject to specified conditions, may not be dealt with contrary to those conditions.

(4) Any conditions imposed must be framed in such a manner as to permit flexibility and ease of implementation, while requiring compliance with the principles of land transport policy as contemplated in section 4 of this Act.

MEC may provide funds for land transport

30. (1) For the performance of an MEC's functions in terms of this Act, and to meet the expenditure incurred by the provincial department in performance of the work connected with those functions, the MEC must use moneys received from the Minister or appropriated by the relevant provincial legislature for that purpose.

(2) An MEC may, from funds received under subsection (1), make monies available to municipalities to perform their responsibilities in terms of this Act.

(3) The moneys made available under subsection (1) are to be applied so as to give effect to the national and provincial land transport policy and to achieve the objects and purposes of this Act, and the MEC may for that purpose impose conditions including conditions relating to specific purposes for which the money is to be used.

(4) Moneys made available in terms of this section—

- (a) for use for a particular or specified purpose, may not be used for any other purpose; or
- (b) subject to specified conditions, may not be dealt with contrary to those conditions.

In terms of funding sources for land transport the act thus identifies the following sources:

- Interest on cash balances already invested in the dedicated transport funds.
- Public transport user charges, such as parking charges, entrance charges, etc.
- Grant funding for specific purposes provided by the National Department of Transport.
- Grant funding provided by the provincial MEC to municipalities for specific projects.

13.3.2 Land Transport Amendment Act

I the land transport Amendment Act 23 of 2023 clause 27 was amended as follows:

Amendment of section 27 of Act 5 of 2009

17. Section 27 of the principal Act is hereby amended by the substitution for subsection (5) of the following subsection:

“(5) The municipal manager [or chief executive officer] of such a municipality must submit, annually to its council, for approval estimates of expenditure to be defrayed from the fund and may make no payment from that fund except in accordance with such estimates or with the prior approval of that council.”.

This amendment does not affect the PLTF.

13.4 Funding and Funding Sources

Transport is the lifeline of economic activity, and the efficient and effective movement of people and goods is essential for the economy to grow. There is enormous pressure on the fiscus from all sectors, and transport is competing for funds against all other sectors. This section of the report addressing the various funding options available to the Province in the quest to fund transport related activities.

13.4.1 Funding Definitions

Given the fact that funding related terms are often being used interchangeably and to ensure that there is a clear understanding of what is being meant in this chapter, the following definitions are provided for clarity purposes:

- **Funding** relates to how the project is ultimately paid for, i.e., revenue derived from budgets, user charges and/or government support through subsidies;
- **Financing** refers to the activity of amortising (postponing and smoothing) what would have been upfront financial obligations, so that the cost stream becomes more aligned with the revenue stream (*and always entails off-budget financing from "outside" sources*), and
- **Charging** refers to the mechanics of how users pay, the type and level of fee they pay and the form of payment (it therefore is a sub-set of Funding).

13.4.2 Funding Sources

As will be demonstrated in the following sub-sections government still plays the most important role in the funding of public transport operations and infrastructure. Figure 13-1 shows the flow of funds across government spheres.

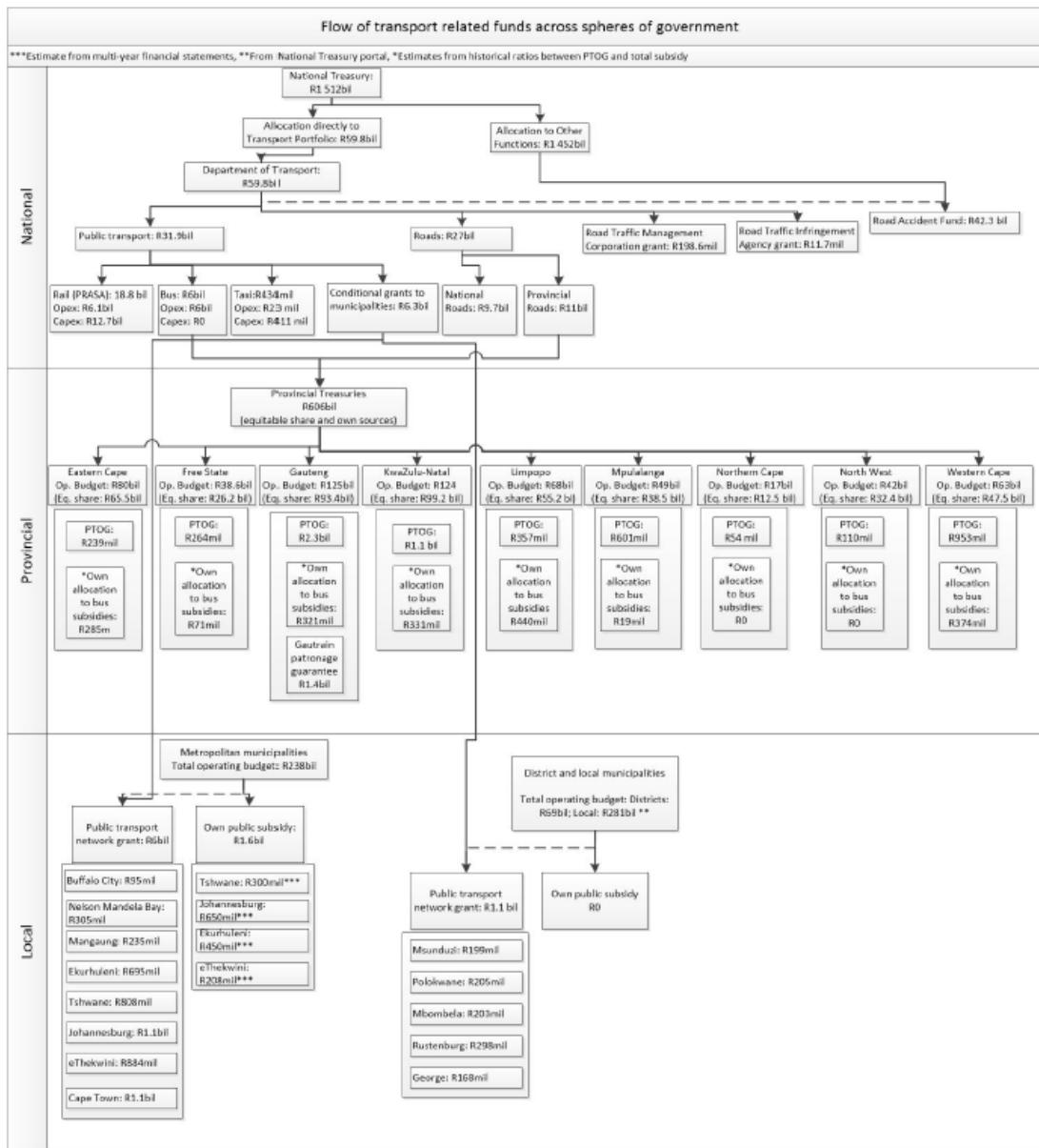


Figure 13-1 Flow of funds across government spheres

According to the Draft Public Transport Subsidy Policy (Government Gazette No.4431 of 23 February 2024) public transport funding is split 86%, 9%, and 4%, across national, provincial and local government respectively. Provinces mainly fund public transport in the form of supplementing the public transport operations grant from the national government. Provinces that mainly fund public transport (bus services) from their equitable share are the North West (typically 80% from the province), the Eastern Cape (typically 55% from the province), and Limpopo (typically 50% from the province). Other provinces range from 0% to 7% of own funding to subsidised bus services. The Gauteng provincial government funds the Gautrain train service to the tune of R1.6 billion as shortfall funding for less than planned fare revenue, which amounts to 46% of

the total public transport funding from all provinces. Municipalities mainly fund public transport in the form of financing shortfalls in municipal-owned bus services. Funding for public transport as a proportion of total provincial budget in the individual provinces ranges from 0.3% in North West Province to 3.4% in Gauteng

Province. Despite being planning authorities in terms of the National Land Transport Act, and being responsible for concluding subsidised service contracts, municipalities only have direct control of 22% of total public transport funding in the country.

Figure 13-2Figure 13-2 shows a schematic representation of funding sources available for transport projects in South Africa.

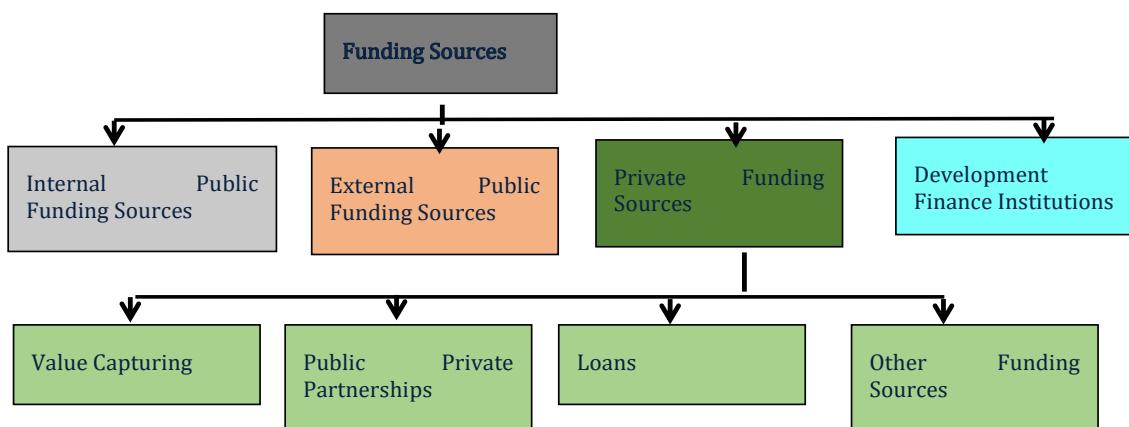


Figure 13-2: Schematic Representation of Funding Sources

The figure shows that there are generally three main sources of funding/financing, namely internal public funding sources, external public transport funding sources and private funding sources. For the sake of also discusses those sources available to local and metropolitan Municipalities in Mpumalanga.

13.4.2.1 Internal Public Funding Sources

To meet their devolved social and economic expenditure mandates and obligations, municipalities are empowered with various revenue instruments. Specifically, municipalities fund their capital expenditure through a combination of local tax revenues and credit instruments. Own tax revenues that fund capital expenditure are usually operating budget surpluses that derive from property taxes, user charges and other local taxes. In support of own revenue contributions, local government can also leverage credit financing to support its short- to long-term infrastructure planning.

13.4.2.2 External Public Funding Sources

The main source of external funding of both Mpumalanga Province and its Municipalities is allocations made by National Government on an annual basis as promulgated in the Division of Revenue Act (DoRA). The allocations are either unconditional allocations or conditional allocations. The unconditional allocations are made in the form of an "Equitable Share", which can be utilised at the discretion of the Municipality to meet their constitutional and legislative mandates and responsibilities.

From a provincial perspective the main source of external public funding is the following:

- **Equitable share of income collected nationally**

In terms of the Constitution each province is entitled to an equitable share of income collected nationally (income tax, VAT etc.). This is distributed annually in terms of the Division of Revenue Act (DORA) which is passed for each financial year. This income is designed to fund the provinces' expenditure on the functions allocated to it by the Constitution, including the functions of public transport and provincial roads.

- **Conditional grants**

The National Treasury provides an annual conditional grant called the Public Transport Operations Grant (PTOG) to fund the so-called old-order bus contracts. The conditions imposed include that the bus services must be monitored and certain information must be provided. There are also other conditional grants going to the provinces such as the Provincial Roads Maintenance Grant. Section 46 of the NLTA provides that these contracts must be rationalised and converted into municipal contracts based on the municipalities' ITPs.

- **Provincial taxes**

If the province proposes to introduce a provincial tax this is governed by section 228 of the Constitution and the Provincial Tax Regulation Process Act 53 of 2001. The proposal to introduce the tax must be submitted to the Minister of Finance, who may, after following the processes in that Act, introduce a money bill to Parliament to provide for the tax or a money bill providing for the tax may be introduced to the Provincial Legislature. Thus new legislation, either national or provincial, will be required to authorise the tax.

- **User charges**

User charges, such as road tolls are not regarded as taxes, so do not have to follow the abovementioned procedure for taxes, but provincial legislation will be needed to introduce and regulate road tolls. By way of example the Western Cape has a Toll Roads Act that was passed in 1997. A Gauteng Toll Roads Bill was drafted some time ago, but not taken forward. The National Treasury has published guidelines on user charges and the difference between taxes and user charges.

The Mpumalanga provincial grant payments and receipts are discussed in more detail in section 13.4.4.

Figure 13-3 reflects the available unconditional and conditional grants that may be accessed for transport projects in local and metropolitan municipalities.

Figure 13-3: Funding sources for transport projects

Unconditional Grants	DoRA Schedule
Equitable share	Sched 3
Conditional Grants	DoRA Schedule
Urban Settlements Development Grant (USDG)	Sched 4 column B (vote 31)
Integrated City Development Grant	Sched 4 column B (vote 10)
Municipal Systems Improvement Grant	Sched 5 column B (vote 3)
Energy Efficiency and Demand Side Management Grant	Sched 5 column B (votes 29 and 31)
Municipal Human Settlements Capacity Grant	Sched 5 column B (vote 10)
Infrastructure Skills Development Grant	Sched 5 column B (votes 7 and 37)
Local Government Financial Management Grant	Sched 5 column B (votes 35 and 38)
Expanded Public Works Programme	Sched 5 column B (vote 3)
Integrated Grant for Municipalities	Sched 5 column B (vote 3)
Public Transport Network Grant (PTNG)	Sched 5 column B (vote 10)
Water Services Operating Subsidy Grant	Sched 5 column B (vote 37)
Municipal Disaster Recovery Grant	Sched 5 column B (vote 37)
Municipal Infrastructure Grant (MIG)	Sched 5 column B (vote 38)
Integrated National Electrification Programme (Municipal) Grant	Sched 5 column B (vote 29)

Rural Households Infrastructure Grant	Sched 5 column B (vote 31)
Neighbourhood Development Partnership Grant (NDPG)	Sched 5 column B (vote 10)
Rural Roads Asset Management Systems Grant	Sched 5 column B (vote 37)
Municipal Water Infrastructure Grant	Sched 5 column B (vote 38)

The conditional grants are earmarked for specific infrastructure delivery projects. The following grants are available under DoRA:

- **Municipal Infrastructure Grant (MIG)** - The largest infrastructure transfer is made through the municipal infrastructure grant, which supports government's aim to expand service delivery and alleviate poverty. The grant funds the provision of infrastructure for basic services, roads and social infrastructure for poor households in all non-metropolitan municipalities.
- **Urban Settlements Development Grant (USDG)** is an integrated source of funding to upgrade urban informal settlements in the eight metropolitan municipalities. The grant is allocated as a supplementary grant to cities (schedule 4 of the Division of Revenue Act), which means that municipalities are expected to use a combination of grant funds and their own revenue to upgrade informal settlements. Cities report their progress on these projects against the targets set in their service delivery and budget implementation plans.
- **The Neighbourhood Development Partnership Grant (NDPG)** is administered by the National Treasury and has been successfully funding neighbourhood development projects to improve the quality of life of residents in the targeted areas, generally townships. The purpose of the grant is to fund, support and facilitate the planning and development of neighbourhood development programmes and projects that will be catalysts for further development in these areas. An example of an NDPG funded project in eThekweni is the Bridge City Precinct, where R115 million was invested in the construction of an intermodal transport facility, upgrading of public transport routes, a sports hub, SMME business park, taxi rank upgrade, landscaping as well as water infrastructure to support a multi-billion-rand private retail and office development within the precinct.
- **The Public Transport Network Grant (PTNG)** - is the mechanism by which municipalities can strategically invest in the appropriate planning and delivery of quality public transport systems. The PTNG enables municipalities to develop infrastructure and services that forms part of a municipal IPTN (including NMT) and to support the planning, regulation, control, management and operations of financially sustainable municipal PT network services.
- **Integrated Cities Development Grant (ICDG)** provides a financial incentive for metropolitan municipalities to integrate and focus their use of all available infrastructure investment and regulatory instruments to achieve a more compact and efficient urban spatial form. Cities are required to submit Built Environment Performance Plans for this grant. The plan provides a brief strategic overview of a city's plans for the built environment, with a focus on the infrastructure grants that form part of the capital budget. The plan should show how the municipality will ensure alignment between its different grant-funded programs and how it will address related policy and regulatory matters.

13.4.2.3 Private Funding Sources

Owing to the inadequacy of public funding sources to fund all the required infrastructure. Authorities such as Mpumalanga Province and the local authorities will have to explore innovative alternatives to mobilise private party funds. Private sector investment in local transport projects has been extremely limited to date. Private equity investment could reduce the public sector's financing costs and thus diversify the financing package. A number of options have been identified, namely:

Value Capturing

Value capturing entails the principle of local government extracting the increase in property value created by some form of public investment. This investment is normally by way of new infrastructure development or the renovation or improvement of existing infrastructure. Especially transport infrastructure has proven to be a great catalyst for economic development thereby generating opportunities for wealth creation.

A prime example is Transit-Oriented Development (TOD) which provides a significant opportunity to capture the increase in market value created by the improved accessibility and “additional feet” that it generates as it facilitates the movement of large numbers of people. Typical value capturing mechanisms which can be considered include:

Incentive zoning is where developers are incentivised by allowing them higher density developments in exchange for some form of contribution from them which is to the benefit of the community or assists the municipality to deliver on their mandate. Higher densities may be achieved by allowing a developer an additional floor of office space in an office block development or allowing additional residential units per hectare. In return the developer is obliged to develop affordable housing units, establish public facilities, build infrastructure, historic preservation or contribute to a fund earmarked for a specific purpose.

The principle of this mechanism is that the additional density awarded improves the financial profitability of the project thereby enabling the developer to afford the required contribution. This mechanism brings the added benefit that it supports a City’s densification goals, where these goals do exist. The City, however, needs to ensure that areas identified enjoy adequate demand to support the densification and that the infrastructure in the area can support the added burden.

Inclusionary zoning – Zoning regulations for a specific area require developers to include a certain number or percentage of low to moderate income housing. This could be further enhanced through additional density, thereby creating greater opportunity for cross-subsidisation.

The benefit is promotion of mixed income communities, allowing lower income brackets of the community to share in the prosperity of the City created by new developments. It also allows a greater portion of the work force to live in closer proximity to their place of employment.

Additional development “space” is created by making the air rights above public infrastructure and facilities available for development. This could include development above stations or parking areas or across rail lines or roads. The airspace could be made available against cash compensation or contributions in kind.

Joint development – Council enters into a joint development agreement with a developer with both parties contributing to the cost of the development. Council’s contribution will typically be the land on which the development takes place. Council could make the land available on a long lease basis thereby creating a revenue stream which would bolster Council coffers.

Development charges which represent levies imposed on developers when land is rezoned or development permits or building permits are issued. The City needs to ensure more effective cost recovery on the services that it provides, including security access restrictions, wayleaves and pavement reinstatement. The current developer contribution formula, and the way it is applied, may need to be reviewed to ensure increased cost recovery.

Public-Private-Partnerships

The term Public-Private Partnership (PPP) has no legal definition and is used to describe a wide variety of arrangements between the public and private sectors working together to deliver a Governmental function. The MFMA provides a set of regulations that govern PPPs. Although in many instances Governments tend to largely lose operational control over the underlying project, the ultimate accountability to the citizens for the delivered service remains with the appropriate Governmental Function. The provision of public infrastructure under long term contracts can be structured in two categories of PPPs.

- **Concession PPP** – The municipality grants a private party the right to design, build, finance, and operate a public sector owned infrastructure asset. The concession contract normally covers a fixed period around 25–30 years, after which responsibility for operation reverts to the municipality. The concessionaire recoups its investment, operating, and financing costs, while making a return commensurate with the risk assumed by charging members of the public a user fee. Consequently, a key feature of a concession is that the private party usually assumes the market or demand risk, in addition to the risks of design, finance, construction, and operation. However, demand risk may be shared with the public sector, e.g. the municipality may share the risk by underwriting a minimum level of usage. Typical concession examples include toll roads, railways, urban transport schemes, ports and airports.
- **Availability-Based PPP** – This arrangement is similar to a concession, i.e. the private party also assumes design risk, financing risk, construction risk, and subsequently operation and maintenance risk. However, in this case, the municipality (as opposed to the user) pays the private party to the extent that a public service (not an asset) is made available, based on certain output criteria. As a result, the demand or usage risk remains with the public sector. This is often referred to as a take-or-pay contract of which a power purchase agreement used in power generation projects, is a prime example. This principle has also been

successfully used for the provision of social infrastructure such as schools, hospitals, prisons, or government buildings, where payments are generally based on the availability of the accommodation facility, equipment, or system and not on the volume of usage

A well-structured PPP offers both public and private participants with a number of advantages. From the Municipality's point of view these benefits include:

- Transfer of risk to the party best placed to manage the risk.
- The public-sector benefit from private sector skills, often achieving more efficient and effective project implementation and operation.
- Mobilisation of private funding.
- Access to increased capacity available in the private sector.
- Numerous examples exist globally where Governments have found PPPs to be very effective in ensuring that public facilities are delivered on time and on budget, are properly maintained, and are able to deliver public services in the context of constrained resources.

Unfortunately, PPPs are not always the optimal procurement option as it also comes with considerable challenges. The disadvantages of a PPP procurement process include the following:

- The number of parties involved, and the long-term nature of their relationships often result in complicated contracts and complex negotiations, and therefore high transaction and legal costs. PPP projects can take years to complete.
- Transferring of risks to the private sector comes at a price which may outweigh the benefits to be gained.
- Regulation 16 of the PFMA requires specific approvals by treasury and the process laid out in the PPP manual requires significant specialised capacity and resources from Government.

It is therefore essential, as stipulated in the PPP manual, to assess the suitability of a PPP for a specific project already at an early stage of the project. To assess whether a PPP procurement strategy is suitable for a specific project the PPP manual prescribes the following criteria to be evaluated:

- **Scale** – The net present cost of the probable cash flows should be large enough to allow both the public and the private parties to achieve value-for-money outputs given the likely levels of transaction advisor and other costs. In this regard the investor fraternity applies a rule of thumb of a minimum project size of around R1 billion in the absence of any enhancing factors that may warrant the use of a PPP procurement, for example if the project has significant revenue generation possibilities.
- **Outputs specification** - It must be possible to specify outputs in clear and measurable terms, around which a payment mechanism can be structured.
- **Opportunities for risk transfer** - The allocation of risk to a private party is a primary driver of value for money in a PPP. Where opportunities for allocating risk to the private party are limited, the potential for a PPP to deliver value for money compared with a conventional procurement choice is reduced. Furthermore, the process of risk transfer also places an administrative burden on the Municipality in order to monitor the performance of the private party and administrate the payments, penalties, etc.
- **Market capability and appetite** - The project must be commercially viable, and there must be a level of market interest in it. This will largely be driven by the aspects mentioned above as well whether the service or asset to be delivered through the project is something in which the private sector is actively involved in.

Loans

Loans represent a significant source of funding for a municipality, however, the availability of loans are limited by the financial standing and performance of the municipality. In order to leverage future cash flow to be earned as a result of infrastructure investment the municipality should explore the possibility of incurring loans against predictable new revenue streams. The main requisites for such an arrangement to succeed are:

- The value and timing of the revenues must be reasonably predictable.
- The revenue streams must be sustainable, at least for the duration of the loan.
- The revenue stream must be ring-fenced and dedicated to the repayment of the loan.

The loans may also be in the form of municipal bonds. The repayment of the bonds can be structured to match the expected revenue streams that will be used to repay the bonds.

Other Funding Sources

Economic opportunities at public transport facilities

The municipality can generate revenue by making space available at public transport facilities that private operators can utilise for some form of commercial gain. Opportunities would include selling of advertising space or leasing space to traders in or around at transport precincts. The municipality may also make space available for business ventures in return for maintaining the adjacent transport facility, for example the so called adopt-a-taxi-rank principle where the private sector upgrades and maintains the rank to obtain a certain privilege such as filling station or fast food rights.

User charges

The popularity of user charges lay in the fact that it creates a clear link between payment and benefit received. The following user charges are possible:

Road Pricing. Road pricing means that road users pay directly for driving on a particular road, or in a particular area or at a specific time of day. It has long been advocated that road pricing constitutes an efficient and equitable way to finance roads and other transport projects and encourage more efficient forms of transportation as it better reflects the real cost of travel. Tolls, e.g. creates an explicit link between costs of road use, revenue collected from road users, and investment in roads.

Vehicle License Fees. The licensing of vehicles represents a revenue-raising charging mechanism through which transport projects can be funded. At present the levying of vehicle licenses is a provincial responsibility and a provincial source of funding. Current license fees could be perceived as being low relative to those being levied in other countries as a form of road user charging. Consequently, a surcharge on license fees at the municipal level for transport projects could be contemplated.

Congestion Charging. Congestion charging and electronic road pricing has served as an effective mechanism to reduce traffic congestion in many cities throughout the world. In the medium to long-term congestion can also provide revenue to support transport projects. In the very short-term the costs required to implement a scheme will likely reduce immediate financial returns. In addition to the equipment costs, substantial investment in supporting consulting services is almost certainly necessarily required to deliver a successful scheme. Consequently, congestion charging is often viewed as being a highly effective mechanism to reduce congestion, but its effectiveness in raising revenues will vary on a case-by-case basis.

Parking fees. Off-street and on-street parking provides a good opportunity for revenue generation to the Municipality. These parking facilities also provide ideal opportunity for concessions, from a full BOOT concession, where the Municipality receives a periodic concession fee to a management concession, where the Municipality pays an operator to manage the parking facility for the Municipality's benefit.

Road Tolling. Tolls are a relatively common way to fund major road works with revenues dedicated to the project costs. Tolls are often considered more equitable and economically efficient than other road improvement funding options which cause non-users to help pay for the improvements. However, they tend to be highly politicised and contentious projects in an urban environment stirring up a great deal of public outrage. A road toll is probably suited to a project specific application that is based on project cost recovery rather than contributing revenues into a consolidated fund.

High Occupancy Toll (HOT) lanes are high occupancy vehicle lanes that also allow use by a limited number of low occupancy vehicles if they pay a toll. It is a method of utilising, for a fee, spare capacity in existing public transport lanes. This allows more vehicles to use HOT lanes while maintaining an incentive for public transport and mode sharing and raises revenue. The basic principle is that only permitted vehicles may use these lanes during the hours of operation.

Cordon or area tolls are fees paid by road users to travel in a particular area such as a CBD. A cordon toll is an alternative option to congestion charging and is worth considering when circumstances require a lower initial investment. Cordon tolling schemes only exact a toll at the entrance to a zone and uses relatively low-technology and low-cost toll booths.

Weight-Distance and Other Distance Based Charging Mechanisms. Distance-based pricing means that vehicle charges are based on how much a vehicle is driven. Weight-distance fees are a mileage based road use charge that increases with a vehicle weight. The heavier the vehicle the higher the kilometres charge. It is a more equitable way to fund roads than a fuel tax because it can more accurately represent the roadway costs imposed by individual vehicles.

Traffic Enforcement and Fines. By simply improving enforcement of existing traffic regulations can generate moderate revenue streams through the imposition of fines and penal ties. A more rigorous approach to enforcement may involve a cultural change to the policing environment and probably more human as well as technical resources. If the fines and penalties are dedicated towards new transport projects, then there may be greater public acceptance of tougher enforcement of traffic regulations and stiffer fines.

It will be remiss if the role and function of Development Finance Institutions are not highlighted when it comes to the question of funding and financing. I

13.4.2.4 Development Finance Funding Institutions (DFI)

It will be remiss if the role and function of Development Finance Institutions are not highlighted when it comes to the question of funding and financing. In this discussion, some of the types of fundin discussed thus far will feature in the DFI discussion.

A Development Finance Institution (DFI) is a specialised financial institution that provides financial and technical support for projects aimed at promoting economic development, particularly in developing and emerging markets. A DFI typically fulfils the following roles:

Financing Projects

- **Loans and Equity Investments:** DFIs provide long-term loans, equity investments, or guarantees to support projects that may not attract traditional financing due to higher risks or lower returns.
- **Grants:** Some DFIs may offer grants for specific development initiatives, particularly in sectors like health, education, and environmental sustainability.

Supporting Infrastructure Development

- DFIs typically fund large-scale infrastructure projects, including roads, energy facilities, water supply systems, and transportation networks, which are crucial for economic growth.

Promoting Economic Development

- DFIs aim to stimulate economic growth by financing projects that create jobs, enhance productivity, and improve living standards in communities.

Encouraging Private Sector Investment

- By providing financing and investment, DFIs help to mobilise private sector resources, encouraging co-investment and partnerships that can lead to sustainable development.

Technical Assistance

- DFIs often provide technical expertise and advisory services to project sponsors, helping them design, implement, and manage projects effectively.

Risk Mitigation

- DFIs can help reduce perceived risks for investors and lenders by offering guarantees or insurance, making it easier for projects to secure additional financing.

Capacity Building

- DFIs may engage in capacity-building initiatives to strengthen the skills and capabilities of local businesses and institutions, fostering a more conducive environment for investment.

Fostering Sustainable Development

- Many DFIs prioritize projects that align with environmental sustainability, social equity, and good governance, aiming to ensure that development benefits are inclusive and sustainable.

Partnerships and Collaboration

- DFIs often collaborate with governments, international organizations, non-governmental organizations (NGOs), and other stakeholders to achieve development goals and maximize impact.

In South Africa, several development finance institutions (DFIs) play a crucial role in funding projects aimed at promoting economic growth, infrastructure development, and social upliftment. Key DFIs include:

Development Bank of Southern Africa (DBSA)

The DBSA finances infrastructure projects in transport, energy, water, and social sectors. It focuses on promoting sustainable development and regional integration. It does invest (and loan money) for transport projects, but is probably limited to large projects such as the Lobito Corridor.

Industrial Development Corporation (IDC)

The IDC provides funding for industrial development projects, including manufacturing, agriculture, and mining. It aims to promote economic growth and job creation in South Africa.

Infrastructure South Africa

Infrastructure South Africa (ISA) is a government agency that plans, manages, and delivers infrastructure in South Africa. ISA leads the country's infrastructure strategy by preparing, appraising, and evaluating infrastructure projects. ISA also provides technical and financial support to priority projects. Projects' capital value should be at least R1 billion in value and should have the potential to crowd in investment from alternative sources (e.g. Multilateral Development Banks, Development Finance Institutions) other than the fiscus (National Treasury).

African Development Bank (AfDB)

Although not exclusively a South African institution, the AfDB funds projects across the continent, including infrastructure and development initiatives in South Africa. The AfDB recognises the importance of transport infrastructure for economic growth and development. The AfDB's Programme for Infrastructure Development in Africa (PIDA) focuses on transport, energy, water, and information and communication technologies. The AfDB has funded transport projects in South Africa, such as, SA Taxi (\$100m), SA Commuter transit project, as well as providing corporate loans to Transnet.

International Finance Corporation (IFC)

The IFC is a member of the World Bank Group and is the largest global development institution focused on the private sector in emerging markets. The IFC has provided a total of almost \$400 million in debt financing and guarantees since 2004 to support the City of Cape Town, the City of Johannesburg, the City of Ekurhuleni, and Buffalo City. The IFC's investments in transportation infrastructure aim to:

- Modernise ports, airports, roads, railways, shipping, and logistics
- Reduce urban congestion
- Create jobs
- Facilitate international trade
- Relieve bottlenecks
- Reduce transportation costs

13.5 Needs Analysis for the Mpumalanga Provincial Road Network

The principal objective of this report was to analyse the 13 837 km provincial roads under jurisdiction of Department of Public Works, Roads and Transport to determine the impact of the MTEF funding on the predicted performance of these roads. Coal and non-coal haul roads were analysed separately because these two sub-networks of roads have different specified funding amounts from the MTEF budgets. Proportionally the coal haul roads carry more traffic and heavy vehicles than the non-coal haul roads from a length perspective.

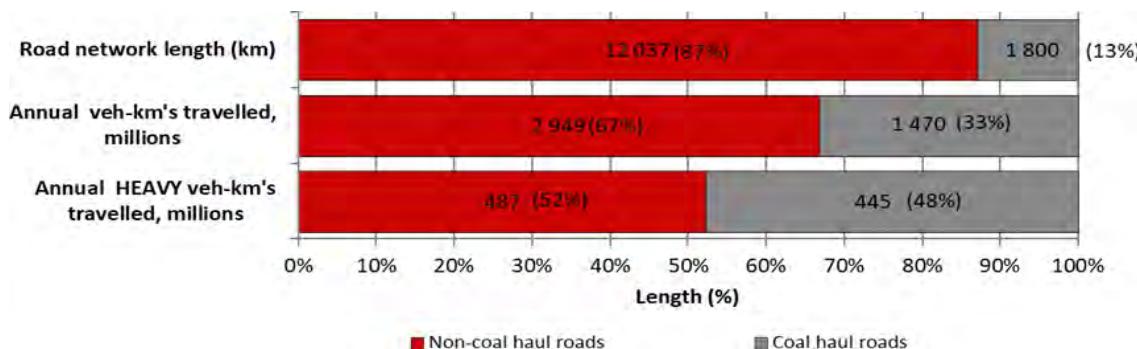


Figure 13-4: Network length vs traffic for coal and non-coal haul usage.

This analysis determined the impact of the MTEF funding levels considering the following intervention treatments: fog-spray, reseal, rehabilitation, re-gravelling and upgrading of unpaved roads to paved standards. Gravel roads carrying very low traffic or of RCAM class 4 and 5 were not selected for re-gravelling, and the triggers for resealing and rehabilitation on low volume roads were eased to allow more deterioration (thus lower level of service) before triggering. A routine maintenance policy is assumed where unpaved roads of low traffic or RCAM class 4 and 5 are maintained by means of shaping and grading of the existing surface and spot re-gravelling. No re-gravelling is considered.

Coal Haul Roads:

The current MTEF funding level for coal haul roads, for fog sprays, reseals, rehabilitation, re-gravelling and upgrading to paved standards of unpaved roads, at an average of R328 million per annum, for the period 2020 to 2029, is insufficient to maintain the road network at increased performance levels. This budget scenario was analysed, and the following was found:

- The MTEF funding level is insufficient to prevent further deterioration of the coal paved road network. The Provincial MTEF Budget scenario will reduce (i.e. deteriorate) the current overall condition of 63% by 9% over the next 10 years, and the Optimised MTEF Budget scenario will reduce the current overall condition by 7% over the next 10 years.
- The MTEF funding level is insufficient to reduce the proportion of “poor” and “very poor” paved roads to below the RISFSA recommendation of 10%. The proportion of paved roads in “poor” and “very poor” condition will increase from 30% in 2019 to 50% in 2029.
- The maintenance of coal unpaved roads can only be adequately addressed under increased funding levels.
- The importance of preventive maintenance activities such as reseals, and re-gravelling are crucial when road networks are maintained with constrained funding levels. A maintenance policy where preventive reseal and re-gravelling projects are disregarded will result in a continuously declining network condition with escalating investment demands.
- 50% and 13% of coal haul paved and unpaved roads will respectively be non-functional by 2029 if the Provincial MTEF Budget scenario is implemented.
- 44% and 25% of coal haul paved and unpaved roads will respectively be non-functional by 2029 if the Optimised MTEF Budget scenario is implemented.

A Maintain Budget scenario was investigated to determine the funding level required to maintain the coal haul road network at a stable performance level, with no further deterioration occurring in the overall network condition. The average annual need to maintain the paved coal haul road network at a condition level of approximately 66% over the next 10 years was calculated to be approximately R900 million for the period 2020 to 2029. For the Maintain Budget scenario 12% and 5% of coal haul paved and unpaved roads are non-functional, respectively, by 2029.

An annual funding level in excess of R1 190 million is necessary to maintain paved coal haul roads with preventative maintenance and rehabilitation treatments to ensure that the proportion of roads in “poor” and “very poor” condition is within the acceptable RISFSA recommendation of 10% within the next 5 years.

Non coal haul roads:

The current MTEF funding level for non-coal haul roads, for fog sprays, reseals, rehabilitation, re-gravelling and upgrading of unpaved roads, at an average of R1 017 million per annum, for the period 2020 to 2029, is insufficient to delay further deterioration of the non-coal haul road network.

- The overall condition of the non-coal paved network will reduce from a “fair” condition of 60% to a “poor” condition of 42% over the next 10 years.
- The proportion of non-coal paved roads in “poor” and “very poor” condition is expected to increase from 31% in 2019 to 53% over the next 10 years. 35% of the backlog is expected to be in “very poor” condition and thus possibly non-functional.
- The maintenance needs of non-coal unpaved roads cannot be addressed under the current funding constraints and the wearing courses will continue to deteriorate rapidly.
- The proportion of the non-coal unpaved road network containing “insufficient” gravel wearing course material is expected to increase from 54% in 2019 to 92% over the next 10 years.
- The importance of preventive maintenance activities, such as reseal and re-gravelling are crucial when road networks are maintained with constrained funding levels. A maintenance policy where preventive resealing and re-gravelling projects are disregarded will result in a continuously declining network condition with escalating investment demands.
- 61% and 66% of non-coal haul paved and unpaved roads will respectively be non-functional by 2029 if the Provincial MTEF Budget scenario is implemented.
- 61% and 5% of non-coal haul paved and unpaved roads will respectively be non-functional by 2029 if the Optimised MTEF Budget scenario is implemented.

An annual funding level in excess of R3 478 million is necessary to maintain paved non-coal haul roads with preventative maintenance and rehabilitation to ensure that the proportion of roads in “poor” and “very poor” condition is within the acceptable RISFSA recommendation of 10% within the next 5 years.

An annual funding level in excess of R688 million is required for the re-gravelling of unpaved non-coal haul roads to ensure that the proportion of roads consisting of gravel wearing course material with insufficient thickness is within the acceptable RISFSA recommendation of 10% within the next 5 years.

13.6 Annual Report

The latest Annual Report that is available is the one for 2022/ 2023 and that information is used as a report back of typical implementation activities for the Department:

13.6.1 Performance Information: Transport Infrastructure

Transport Infrastructure is the Department’s largest Program and the capital investment demonstrates its commitment to improve the provincial road network. Fundamentally, what drives this program is the need to improve access and mobility to public amenities and economic opportunities. In the time period of 2022- 2023, several noticeable outputs were registered including the support offered to local municipalities. The continued investment in roads infrastructure will help DPWRT to achieve its priority outcome of improving connectivity and growing the economy through enhancements to the transport network. The table 13.1 below includes all outputs, performance indicators and targets:

Table 13-1: Transport Infrastructure Implementation

Outcome	Output	Output Indicator	Audited Actual Performance 2021/ 2022	Planned Annual Target 2022/ 2023	Actual Achievement 2022/ 2023	Deviation from planned target to Actual Achievement 2022/2023	Reasons for deviation
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An efficient, competitive and responsive economic infrastructure network	Infrastructure plans developed	Number of consolidated infrastructure plans developed	-	1	1	0	None.
	Visual condition assessment of the provincial surfaced road network conducted	Number of kilometers of surfaced roads visually assessed as per the applicable TMH manual	4 393	3 000	5 627	2 627	Reprioritize and reprogramming of works to increase number of assessments completed
	condition assessment of the provincial gravel road network conducted	Number of kilometers of gravel roads visually assessed as per the applicable TMH manual	3 583	3 500	8 038	4 538	
An efficient, competitive and responsive economic infrastructure network	Roads infrastructure designs completed	Number of Infrastructure designs completed	11	4	4	0	None.
An efficient, competitive and responsive economic infrastructure network	Rural and access roads upgraded	Number of kilometres of gravel roads upgraded to surfaced roads	12	15	7	-8	See breakdown below:
		Surfaced roads	-	11	3	-8	Community unrest.
		Paving	-	4	4	0	None.

	Rural mobility and accessibility improved	Number of IRMA projects completed	3	5	5	0	None.
An efficient, competitive and responsive economic infrastructure network	Contractors participating in the National Contractor Development Programme (NCDP)	Number of contractors participating in the National Contractor Development Programme (NCDP)	-	32	53	21	More contractors identified than planned.
An efficient, competitive and responsive economic infrastructure network	Coal haulage and tourism network rehabilitated	Number of square kilometers of surfaced roads rehabilitated	-	282 080	141 000	-141 080	Poor contractor performance and financial challenges by the contractor.
	Strategic and access roads resealed	Number of square meters of surfaced roads resealed	495 326	987 864	574 360	-413 504	Resources were re-directed to address flood damages.
	Strategic and rural roads re-graveled	Number of km of gravel roads re-graveled	294	187	284	97	High demand due to poor road condition.
	Strategic and access roads patched	Number of square meters of blacktop patching	186 755	141 186	204 612	63 426	High demand due to poor road condition.
	Strategic and rural roads bladed	Number of kilometres of gravel roads bladed	20 432	34 467	16 792	-17 675	

The following table represents the expenditure on Transport Infrastructure:

Table 13-2: Expenditure on Transport Infrastructure.

Sub- Programme Name	2022/2023
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	Final Appropriation	Actual Expenditure	(Over)/ Under Expenditure
	R'000	R'000	R'000
Programme Support	2,301	2,301	-
Infrastructure Planning	61,818	61,818	-
Design	38,635	38,635	-
Construction	741,143	743,601	(2,458)
Maintenance	1,075,570	1,071,232	4,338
Total	1,919,467	1,917,587	1,880

The following strategies were identified to overcome areas of underperformance as identified in the table below:

Table 13-3: Strategies to alleviate underperformance.

Area of under-performance	Reasons for under-performance	Strategies to overcome area of under-performance
Upgrading of gravel roads to surfaced roads	<p>Slow progress on various projects due to community unrests and rainfall. Projects include:</p> <ul style="list-style-type: none"> ▪ Upgrading of Road D4407, D4409 and a section of D4416 between Hluvukani and Orpen Road P194/1 near Welverdiend (7.82km) – Bohlabela ▪ Upgrading of Road D481 Ebuhleni to Maanaar between Mooiplaas and Ekulindeni (7.2km) - Gert Sibande 	Project time frames were revised for completion in the 2023/24 financial year.
Surfaced roads rehabilitated	<ul style="list-style-type: none"> ▪ Delays due to poor contractor performance and financial challenges by the contractor. ▪ Long works suspension on Road P36/1 Delmas, P182/1 Hendrina and D2486 Klipwal also played a role in the shortfall. 	<ul style="list-style-type: none"> ▪ P182/1 contract terminated, Cessions and subcontracting agreements signed for both P36/1 and P29/1, and the sub-contractors busy with the works. ▪ Extension of time and VO approved for D2486 Klipwal.
Surfaced roads resealed	<ul style="list-style-type: none"> ▪ Resources were re-directed to address flood damages. 	<ul style="list-style-type: none"> ▪ Works to be completed in the next financial year 2023/24.
Blading of gravel roads	<ul style="list-style-type: none"> ▪ The blading of bypasses is considered a temporary intervention while upgrading of roads are in progress. ▪ Works are done on an ad hoc basis, as and when required and no completion certificates are issued since it's a temporary measure. 	<ul style="list-style-type: none"> ▪ The Department will exclude the blading of bypasses when reporting on gravel roads bladed.

13.6.2 Performance Information: Transport Operations

The purpose of the programme is to plan, regulate and facilitate the provision of integrated land transport services through co-ordination and co-operation with national planning authorities, CBOs, NGOs and the private sector in order to enhance the mobility of all communities particularly those currently without or with limited access.

The following sub-programmes can be identified within Transport Operations as detailed in the table below:

Table 13-4: Sub- programmes in Transport Operations

Sub-programmes	Purpose of the Sub- Programmes
Programme Support	Overall management and support of the programme.
Public Transport Services	The management of integrated land transport contracts to provide mobility to the commuters.

Transport Safety and Compliance	To manage/co-ordinate and facilitate the transport safety and compliance in all modes with related legislation, regulations and policies through proactive and reactive tactics and strategies. This includes the monitoring of public transport operators in terms of national and provincial legislation to ensure safety of commuters.
Transport Systems	To manage and operate public transport systems and the support services required such as; mass movement systems, Intelligent traffic systems, Fare management systems, integrated ticketing system, electronic traffic signs etc.
Infrastructure Operations	To manage transport terminals such as inter modal terminals, air passenger and freight terminals.

In the 2022/23 financial year, the Department provided public transport to more than 135 000 daily commuters through its bus subsidization scheme. In addition, it facilitated the transportation of approximately 69 725 learners and further regulated public transport operations through its Transport Inspectorate in partnership with various local municipalities and the Department of Community Safety, Security and Liaison (DCSSL). An integrated transport system is an essential part of development ambitions of the province since it facilitates the movement of people, goods and services. This system is dependent on continuous stakeholder engagements to ensure availability of viable transport options for all, improve transport affordability and remove barriers to access.

Table 13-5: Transport Operations Implementation

Outcome	Output	Output Indicator	Planned Annual Target 2022/2023	Actual Achievement 2022/2023	Deviation from planned target to Actual Achievement 2022/2023	Reasons for deviations
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Sub-programme: Public Transport Services

An efficient, competitive and responsive infrastructure network	Effective Management of bus subsidy contracts	Number of routes subsidized	154	154	0	None.
	Effective Management of bus subsidy contracts	Number of vehicle kilometers subsidized	27 109 763	26 763 584	-346 179	Community protest, reduction of services blockade of buses by taxi operators, DNO's and vehicle breakdown.
	Effective Management of bus subsidy contracts	Number of trips subsidized	814 892	812 007	-2 885	
An efficient, competitive and responsive infra- structure network	Effective Management of Scholar Transport services	Number of scholar transport routes monitored	1 673	1 673	0	None.

Sub-programme: Transport Safety and Compliance

An efficient, competitive and responsive infrastructure network	Monitoring and enforcement of NLTA	Numbers of roadside checks conducted	3 500	4 129	629	Additional operations conducted during festive seasons, monitoring of scholar transport and unrests/ protests.
An efficient, competitive and responsive infrastructure network	Oversight and monitoring of public transport in the province	Number of Provincial Regulating Entity (PRE) hearings conducted	48	48	0	None.

Transport Operations spent 99,7% of its budget and in the process achieved 5 of the 6 (83%) planned targets at year end. The expenditure includes Compensation of Employees and related benefits for the staff complement under all the sub-programmes. It also includes funds spent on coordinating regional logistics and cross border operations along various corridors in Mpumalanga. However, the programme could not spend all of its budget due to the inability to undertake some planned kilometers during service delivery protests. Subsequently, the savings were surrendered to Treasury as per the requirements of the Division of Revenue Act (DORA).

Expenditure on transport operations is detailed in the table below:

Table 13-6: Transport Operations Expenditure

Sub- Programme Name	2022/2023		
	Final Appropriation	Actual Expenditure	(Over)/ Under Expenditure
			R'000
Programme Support	1,037	1,037	-
Public Transport Services	1,275,343	1,271,345	3,998
Transport Safety and Compliance	65,804	65,804	-
Transport Systems	14,622	14,622	-
Infrastructure Operations	5,585	5,585	-
Total	1,362,391	1,358,393	3,998

The following strategies have been defined to overcome areas of under-performance.

Table 13-7: Strategies for under-performance strategies

Area of under-performance	Reasons for under-performance	Strategies to overcome area of under-performance
Number of vehicle kilometers subsidized	Some operators were affected by community protests, reduction of services, blockade of buses by taxi operators, DNO's and vehicle breakdowns.	Savings on the Provincial Transport Operations Grant were surrendered to Provincial Treasury.

13.6.3 Performance Information Community Base Programmes

The purpose of the program is to manage the implementation of programs and strategies that lead to the development and empowerment of communities and contractors. This includes the provincial management and co-ordination of the Expanded Public Works Program (EPWP).

The following sub- programs have been identified:

Table 13-8: Community Base sub- programs

Sub-programs	Purpose of the Sub-Programs
Program Support	Overall management and support of the programs
Community Development	Programs to bring about the development and empowerment of impoverished communities.
Innovation and Empowerment	Programs to develop contractor empowerment, development of new programs and training.
EPWP Coordination and Monitoring	The management and co-ordination of expenditure on the Expanded Public Works Program.

The Expanded Public Work Program (EPWP) continued to create the much-needed work and training opportunities for the poor, unemployed, youth and women. The Mpumalanga Province created a total of 35 027 work opportunities in the past year and the main beneficiaries of these jobs were 22 661 women, 15 576 youth and 298 people with disabilities. DPWRT contributed a total of 8 310 of these work opportunities created in the province. The EPWP has further provided training to assist job seekers to build the skills necessary to gain employment and create new enterprises. The expenditure on these programs was as follows:

Table 13-9: Expenditure on community base programs.

Sub- Programme Name	2022/2023		
	Final Appropriation	Actual Expenditure	(Over)/ Under Expenditure
			R'000
Programme Support	1,187	1,187	-
Community Development	47,812	47,812	-
Innovation and Empowerment	10,129	10,129	-
EPWP Co-ordination and Monitoring	15,103	15,103	-
Total	74,231	74,231	-

1.2.5 Transfer payments

These are transfer payments to all organisations other than public entities. It is reflected in the table below:

Table 13-10: Transfer Payments

Name of transferee	Type of organisation	Purpose for which the funds were used	Did the dept. comply with s 38(1) (j) of the PFMA	Amount transferred (R'000)	Amount spent by the entity	Reasons for the funds unspent by the entity
Provincial Land Transport Framework	SMEC Internal Ref. BG426					

Bus operators X 6	Public transport operators	Bus subsidies	Yes	743,515	739,517	Some operators were affected by community protests, reduction of services, blockade of buses by taxi operators, DNO's and vehicle breakdowns.
Provincial Taxi Council	Public transport operators	Training and skill development	Yes	11,000	11,000	None.
All provincial local municipalities	Municipalities	Rates and taxes	Yes	422,361	422,363	None.
Households	Employees	Injury on duty, leave gratuity and claims against the state (cash)	Yes	22,724	22,724	None.

13.6.4 Conditional Grants

The Department received R1, 625, 310 of grant funding and managed to spend R1, 621, 309 (99, 8%) by the end of the financial year. The tables below detail the conditional grants and earmarked funds received for the period 1 April 2022 to 31 March 2023:

Table 13-11: Conditional Grant 1: Provincial Road Maintenance Grant (PRMG)

Department who transferred the grant	To supplement provincial roads investments and support preventative, routine and emergency, maintenance on provincial road networks.
Purpose of the grant	Improvement of the provincial roads infrastructure.
Expected outputs of the grant	<ul style="list-style-type: none"> ■ 141 000 Square meters of surfaced roads rehabilitated ■ 574 360 Square meters of surfaced roads resealed ■ 284 Km of gravel roads re-gravelled ■ 204 612 m² of blacktop patching ■ 16 792 Km of gravel roads bladed
Actual outputs achieved	907,146
Amount per amended DORA	907,146
Amount received (R'000)	Not applicable.
Reasons if amount as per DORA was not received	None.
Amount spent by the department (R'000)	907,143
Reasons for the funds unspent by the entity	Not applicable.
Reasons for deviations on performance	Enforcement of contractual conditions (e.g. revised work plans, penalties, terminations, etc.).
Measures taken to improve performance	Performance reports, contractors' and consultants' meetings and physical inspection of progress.
Monitoring mechanism by the receiving department	To supplement provincial roads investments and support preventative, routine and emergency, maintenance on provincial road networks.

Table 13-12: Conditional Grant 2: Public Transport Operations Grant (PTOG)

Department who transferred the grant	National Treasury.
Purpose of the grant	To provide supplementary funding towards public transport services provided by the provincial department.
Expected outputs of the grant	To provide access to transport facilities for the citizens of the province.
Actual outputs achieved	<ul style="list-style-type: none"> ■ 154 Routes subsidised ■ 26 763 584 Km subsidised ■ 812 007 Trips subsidised
Amount per amended DORA	711,126
Amount received (R'000)	711,126

Reasons if amount as per DORA was not received	Not applicable.
Amount spent by the department (R'000)	707,128
Reasons for the funds unspent by the entity	Community protests, trips not operated and blockade by taxi operators.
Reasons for deviations on performance	Community protests, trips not operated and blockade by taxi operators.
Measures taken to improve performance	Enforcement of contractual conditions (e.g. penalties) and NLTA (e.g. fines, impoundment, etc.).
Monitoring mechanism by the receiving department	Performance reports, public operators' and commuters' meetings and monitoring of trips and routes.

Table 13-13: Conditional Grant 3: Expanded Public Works (EPWP) Grant

Department who transferred the grant	National Treasury.
Purpose of the grant	Performance based grant for job creation.
Expected outputs of the grant	Creation of 350 Youth work opportunities.
Actual outputs achieved	327 Work opportunities were created.
Amount per amended DORA	7,038
Amount received (R'000)	7,038
Reasons if amount as per DORA was not received	Not applicable.
Amount spent by the department (R'000)	7,038
Reasons for the funds unspent by the entity	None.
Reasons for deviations on performance	The under-achievement was due to participants finding permanent work opportunities or leaving for greener pastures.
Measures taken to improve performance	EPWP departmental forum established.
Monitoring mechanism by the receiving department	Performance reports and EPWP reporting system and mentorship reports by the mentors.

1.2.6 Capital Investment

The table below highlights the overall expenditure for immovable assets (building and transport infrastructure) whose budget was allocated to the Department of Public Works, Roads and Transport:

Table 13-14: Capital Investment Expenditure

Infrastructure projects	2022/2023		
	Final Appropriation R'000	Actual Expenditure R'000	(Over)/ Under Expenditure R'000
New and replacement assets	120,059	167,522	(47,463)
Existing infrastructure assets	1,386,358	1,366,828	19,530
▪ Upgrades and additions	425,682	429,054	(3,372)
▪ Rehabilitation, renovations and refurbishments	359,620	339,774	19,846
▪ Maintenance and repairs	601,056	598,000	3,056
Infrastructure Transfer			
▪ Current	601,056	598,000	3,056
▪ Capital	905,361	936,350	(30,989)
Total	1,506,417	1,534,350	(27,933)

13.7 Annual Performance Plans

The only annual performance plan of the Department of Public Works, Roads and Transport of the Mpumalanga Province that was available during the time of writing of the PLTF was the one dated March 2022, which makes it quite dated. However, it did contain medium term budgets for the years 2022/23, 2023 /2024 and 2024/ 2025, which not only provided trends for expected funding for operations, but also provided information on the types of projects that was and is to be funded. These budgets for various programmes and projects are being provided below:

The current MTEF funding regime for fogsprays, reseals, rehabilitation, regravelling and upgrading to paved standards of unpaved roads, is insufficient to maintain the road network at increased performance levels. The over reliance on grant funding and equitable share is not sustainable hence the growing need to identify alternative funding for transport infrastructure. To this regard, the Department is pursuing strategic partnerships with SASOL, mining houses and farmers in order to meet the increasing demand for better roads. These engagements pave the way for introduction of user charges on specific road users. If successful, a sizeable percentage of the revenue would be reinvested to preserve this strategic economic infrastructure.

Table 13-15: Roads Budget Summary per Region.

Region	2022/23		2023/24		2024/25	
	Amount	(%)	Amount	(%)	Amount	(%)
Ehlanzeni North	R 276 944,00	43%	R 284 834,00	41%	R 234 903,00	43%
Ehlanzeni South	R 38 440,00	6%	R 186 997,00	27%	R 118 283,00	21%
Gert Sibande	R 117 383,00	18%	R 102 892,00	15%	R 99 908,00	18%
Nkangala	R 215 600,00	33%	R 121 945,00	17%	R 98 863,00	18%
TOTAL	R 648 367,00	100%	R 696 668,00	100%	R 551 957,00	100%

Table 13-16: Overall Programme Overview.

Programs	Medium-Term Budgets		
	2022/23 (R)	2023/24 (R)	2024/25 (R)
1. Administration	359 479 000	361 723 000	379 599 000
2. Public Works Infrastructure	1 268 843 000	914 079 000	949 134 000
3. Transport Infrastructure	1 964 667 000	2 077 696 000	2 176 802 000
4. Transport Operations	1 317 433 000	1 231 026 000	1 286 299 000
5. Community Based Programs	82 879 000	77 592 000	85 430 000
Total payments and estimates	4 993 301 000	4 662 116 000	4 877 264 000

In terms of Transport Infrastructure, the various sub-programmes are being provided for as follows:

Table 13-17: Transport Infrastructure Sub-programmes' Expenditure.

Sub-Programs	Medium-Term Budgets		
	2022/23 (R)	2023/24 (R)	2024/25 (R)
Program Support	2 587 000	2 656	2 775
Infrastructure Planning	78 092 000	75 552	78 945
Design	27 827 000	50 165	52 417
Construction	710 588 000	799 800	981 513
Maintenance	1 145 573 000	1 149 523	1 061 152
TOTAL	1 964 667 000	2 077 696	2 176 802

In terms of Transport Operations, the various sub- programmes are being provided for as follows:

Table 13-18: Transport Operations Sub- programs' Expenditure.

Sub-Programs	Medium-Term Budgets		
	2022/23 (R)	2023/24 (R)	2024/25 (R)
Program Support	3 123 000	3 156 000	3 298 000
Public Transport Service	1 224 453 000	1 131 911 000	1 182 736 000
Transport Safety and Compliance	61 628 000	67 049 000	70 060 000
Transport Systems	18 038 000	18 465 000	19 293 000
Infrastructure Operations	10 191 000	10 445 000	10 912 000
TOTAL	1 317 433 000	1 231 026 000	1 286 299 000

An efficient public transport system and service is not only important to the economic growth of the province, but it is also important to ensure safety, accessibility, reliability and affordability. As such, the Department supports these priorities through various public transport operations which include subsidisation of almost 400 000 commuters on a daily basis. In addition, approximately 63 600 learners are provided with scholar transport thus giving them access to quality education. The Department is also expected to facilitate and ensure compliance to public transport laws and regulations when the above- mentioned services are rendered hence the inclusion of road safety and licensing targets.

This chapter covers objectives 4.

14 Chapter 14: Monitoring

14.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Monitoring Chapter are defined as follows:

This chapter must at least include the following:

- a) A list of key performance indicators (KPIs) in line with national KPIs as outlined in the NLTSF;
- b) A report on how and to what extent the KPIs set for the province in the NLTSF have been met; and
- c) A report on how and to what extent the KPIs set in the previous year's PLTF have been met.

The purpose of this chapter is therefore to provide strategies and a list of KPI's to monitor the public transport and intra-provincial transport as well as to report on how the KPI's on the public transport and intra-provincial transport have been met in relation to the NLTSF and previous year's PLTF. Of these requirements, however, only the first one can be addressed as, although a previous set of KPIs have been defined, the Mpumalanga Province has not measured these in any way, and information on progress with achieving the KPIs is not available.

14.2 Legal Background

14.2.1 National Land Transport Act

In the National Land Transport Act (Act 5 of 2009) there is a specific reference to monitoring as a function in section 24 as detailed below:

Functions of Provincial Regulatory Entities

24. (1) Each Provincial Regulatory Entity must—
(a) monitor and oversee public transport in the province;
(b) receive and decide on applications relating to operating licences for intra-provincial transport where no municipality exists to which the operating licence function has been assigned, but excluding applications that must be made to the National Public Transport Regulator in terms of section 21.
- (2) As soon as possible after this section comes into operation, the MEC must take steps to disestablish the relevant operating licensing board and to establish the relevant Provincial Regulatory Entity and transfer that board's functions to the Provincial Regulatory Entity.
- (3) Any application concerning an operating licence or conversion of a permit to an operating licence that is pending before a provincial operating licensing board on the date that this section comes into operation, must be finalised either by that board before it is disestablished or by the Provincial Regulatory Entity after it is established, in terms of this Act and directions given by the MEC.

The PRE is thus formally tasked with monitoring public transport and this entity could also be made responsible for all of the monitoring tasks detailed in the remainder of this chapter.

This act also provides details on the monitoring compliance that is required for the PLTF:

Provincial Land Transport Frameworks

35. (1) Every MEC must prepare a five-year Provincial Land Transport Framework in accordance with the requirements prescribed by the Minister after consultation with all the MECs.

(2) The Provincial Land Transport Framework must provide a transport framework as an overall guide to transport planning within the province, being guided by the National Land Transport Strategic framework.

(3) Provincial Land Transport Frameworks must include the planning of both intraprovincial and interprovincial long-distance services, which must be linked where applicable with other public transport services, and may provide for charter services and staff services, and in the case of interprovincial transport, this must be done in consultation with the MEC of the other province or provinces concerned.

(4) The Minister must, as soon as possible after the commencement of this Act, in consultation with the MECs and by notice in the *Gazette*, determine a date by which each province must have prepared its Provincial Land Transport Framework.

(5) All Provincial Land Transport Frameworks must include routes for the transporting of dangerous goods through the province, as reflected in the integrated transport plans within its jurisdiction.

(6) The dates for preparing integrated transport plans must be linked to the Provincial Land Transport Frameworks and must be as agreed upon by the MECs and planning authorities.

(7) The Provincial Land Transport Framework must summarise all available integrated transport plans in the province.

(8) The last Provincial Land Transport Framework prepared under the Transition Act is regarded for all purposes as the Provincial Land Transport Framework prepared in terms of this Act, until the new Provincial Land Transport Framework has been approved by the MEC.

(9) The MEC must update the Provincial Land Transport Framework every two years.

(10) The Provincial Land Transport Framework must be submitted to the Minister for approval on or before the date determined under subsection (4) and must be accompanied by copies of all agreements regarding interprovincial transport concluded between the province and other provinces.

(11) The Minister's approval in terms of subsection (10) is limited to—

- (a) monitoring compliance with the National Land Transport Strategic Framework and with this Act and other applicable legislation;
- (b) procedures and financial issues that affect the national government;
- (c) seeing that the MEC followed the correct procedures and otherwise complied with the prescribed requirements;
- (d) national policies and principles regarding interprovincial and cross-border transport; and
- (e) modes and aspects of transport under the control of the national government or national public entities.

In terms of the act, it is thus clear the minister will only approve the PLTF if the necessary monitoring procedures are being continuously dealt with by the Mpumalanga Province.

14.2.2 National Land Transport Amendment Act

None of the sections listed above have been changed in terms of the monitoring responsibilities as listed.

14.3 National Land Transport Strategic Framework (2023-2028)

14.3.1 Introduction to the NLTSF

The policy role of the NLSDF is depicted in the following diagram:

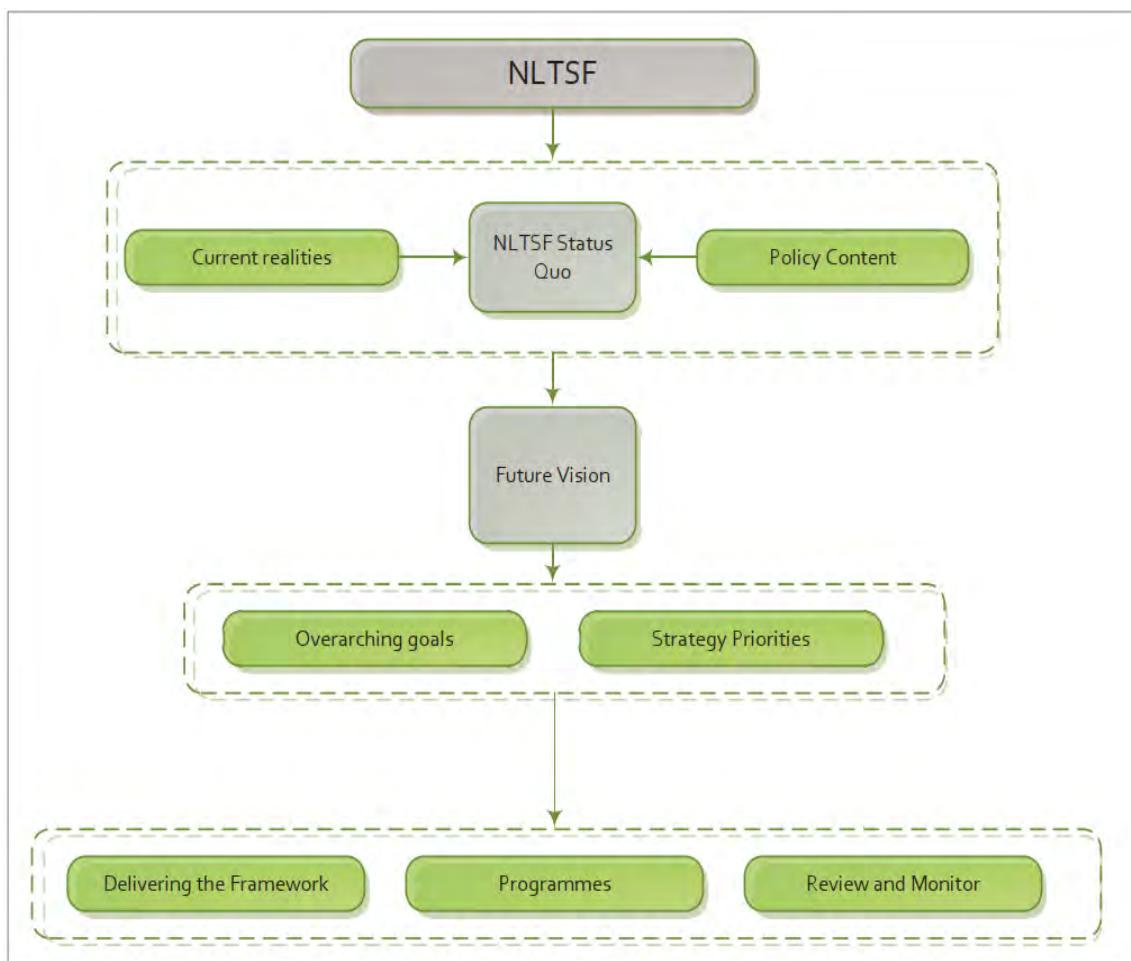


Figure 14-1: NLTSF Process

Fundamentally the NLTSF provides the following key strategic objectives for the next five years (2023-2028):

- To develop a much-improved sustainable public transport system with better and safer access to amenities, more frequent and better-quality services and facilities to and agreed standard.
- A universally accessible transport system, using any mode of transport.
- Facilitate a significant reduction in road fatalities.
- Provide greater mobility options for those who do not have a car.
- Facilitate safer and easier cycling and walking.
- Provide better infrastructure, links and interchange with other means of transport.
- Provide an improved and better maintained road and rail network.
- Facilitate improved journey time reliability on all modes.
- Reduce need to travel by motor vehicles by achieving an integrated land use and transport system.
- Develop a transport system that is consistent with the real needs of people living in different parts of South Africa and with differing abilities to afford travel.
- Develop a transport system that charges the passenger a fair reflection of the costs of making a journey.
- Develop a transport system that supports focused funding of transport priorities.
- Develop sufficient institutional human capital to drive the vision of transport.
- Facilitate rural transport development.

14.3.2 Key Performance Areas as defined in the NLTSF.

The key performance areas for the period 2023 to 2028 are as follows:

- All Planning Authorities to maintain and update a database of traffic and pedestrian counts. (ITS)
- Update Minimum Requirements for the preparation of PLTFs and ITPs.
- All Provinces to update PLTFs to be relevant in this planning period (2023 to 2028).
- All Municipalities to prepare and/or to update Comprehensive, District and Local Municipal ITPs incorporating Public Transport Plans comprising of IPTN, Rationalisation Plan, Operating Licence Strategy and Land Use Plans.
- Improve service quality and safety of public transport.
- Improve access to main public transport nodes by improved walking links (20min of 1,5km), cycle networks and full cycle implementation programmes and prioritising NMT.
- Undertake Household Travel Surveys every five years.
- Improve universal accessibility of public transport networks across all modes of transport, in line with minimum standards and requirements.
- Develop actions and measure impact of rural interventions on safety and travel time.
- Develop a strategic rural road network upgrade and maintenance plan with budgets for rural road network infrastructure upgrades and maintenance.
- Establish the rural transport forum at district level, including universal access.
- Measure the Rural Access Index (which measures the number of people living within three kilo meters of an all-season road and/ or transport service, as a proportion of the total rural population).
- Improve Public Transport efficiencies in accordance with objectives of the Public Transport Strategy through Integrated Public Transport Networks (IPTN).
- Increase commuting to work trips by public transport and walking.
- Increase the proportion of households in rural areas within 1km of an hourly (weekday) public transport service.
- Invest in safe NMT facilities for learners at schools and surrounding areas.
- Monitor the number of bicycles distributed through the Shova Kalula programme.
- Increase the NMT modal share (walking and cycling) for educational and commuting trips.
- Improve access to learner transport services.
- Improve registration and licensing of learner transport operators and demarcation of learner transport vehicles.
- Increase funding for learner transport.
- Improve heavy goods vehicle performance, roadworthiness and self- regulation.
- Reduce overloading by enforcing limits on axle limits and gross vehicle mass.
- Provide effective and safe freight corridors.
- Provide alternative routes for the transport of hazardous materials.
- Optimise the road, rail and pipeline freight balance.
- Provinces and municipalities are to operate a GIS base asset management system for transport infrastructure.
- All transport infrastructure funding is to be aligned with engineering expertise in the provinces and municipalities.
- All provinces and municipalities are to prepare a Strategic Network Plan.
- Increase operational efficiency at border posts for cross-border transport.
- A life- cycle cost approach is to be instituted for proposed transport projects.
- Financial modelling is to be used for revenue-based transport projects.
- Economic evaluation is to be used for proposed transport infrastructure projects, including life- cycle maintenance.

In the table below NLTSF KPIs are provided with a responsibility matrix where N= national, P= provincial, Me= metros, Mu= municipalities and O= other such as SANRAL, PRASA and TFR:

Table 14-1: NLTSF KPIs

Strategic KPI Element	Responsibility Matrix				
	N	P	Me	M u	O

Integrated Land Use and Transport Planning	All Planning Authorities to maintain and update a database of traffic and pedestrian counts;	✓✓			
	Update Minimum Requirements for the preparation of PLTFs and ITPs;	✓✓			
	All Provinces to update PLTFs to be relevant in this planning period (2023 to 2028);	✓	✓✓		
	All Municipalities to prepare and/or update Comprehensive, District, and Local Municipal ITPs incorporating Public Transport Plans comprising of IPTN, Rationalisation plan, Operating Licence Strategy and any Land Use Plans;	✓	✓	✓✓	✓
	Improve Public Transport efficiencies in accordance with the objectives of the Public Transport Strategy through Integrated Rapid Public Transport Networks (IPTN).	✓	✓	✓✓	✓
Urban Transport	Improved service quality and safety of public transport	✓	✓	✓✓	
	Improve access to main public transport nodes by improved walking links (20min or 1,5km), cycle networks and full cycle implementation programmes (within a radius of 5km) and prioritising NMT		✓✓	✓✓	✓ ✓
	Undertake Household Travel Surveys every five years	✓✓	✓		
Universal Accessibility	Improved universal accessibility of public transport networks across all modes of transport, in line with minimum standards and requirements; measured against indicators	✓✓	✓		
	Compliance with minimum standards, the researched development of them and the publication of universal access regulations; for planning, design, construction and operation	✓✓	✓	✓	✓ ✓
	Undertake focused research with universal access passengers every year in order to report on implementation progress, and remedy complaints, as required by the NLTA	✓✓	✓	✓	✓ ✓
Rural Transport	Develop actions and measure impact of rural transport interventions on safety and travel time	✓✓			
	Develop a strategic rural road network upgrade and maintenance plan with budgets for rural road network infrastructure upgrades and maintenance	✓	✓✓		
	Establish the rural transport forum at district level	✓	✓✓		
Public Transport	Increase commuting to work trips by public transport and walking.	✓	✓	✓✓	✓ ✓
	Implementation of universal design and universal access throughout the IPTN incrementally through an Up to Date UDAP, and annual reports	✓	✓✓		✓
	Increase the proportion of households in rural areas within 1km of an hourly (weekday) public transport service.	✓	✓	✓✓	✓ ✓
	Improve Public Transport efficiencies in accordance with the objectives of the Public Transport Strategy through Integrated Rapid Public Transport Networks (IPTN).	✓	✓	✓✓	✓ ✓
	Quality of Service	✓✓	✓	✓	✓ ✓
	Promotion of Public Transport	✓	✓	✓	✓ ✓
	Accessibility	✓	✓✓	✓✓	
	Regulation and Control of Public Transport			✓✓	
Non-Motorised Transport	Development of National guidelines and standards for non-motorised transport (pedestrians and cyclists) as a sub-sector of the transport system to ensure consistent planning and designs that receive the necessary funding	✓✓	✓		
	Investment in safe NMT facilities for learners at schools and surrounding areas		✓	✓✓	✓

	Number of bicycles distributed through the ShovaKalula program		✓	✓✓	✓	
	Increase NMT modal share (walking and cycling) for educational and commuting trips	✓✓	✓	✓	✓	
Learner Transport	Improve access to learner transport services	✓✓	✓			
	Registration and licensing of learner transport operators and demarcation of learner transport vehicles.		✓✓	✓	✓	✓
	Increase funding for learner transport Universal Accessibility: Physically challenged/ Special needs	✓ ✓	✓✓ ✓✓			
Freight transport	Improve heavy goods vehicle safety performance; roadworthiness; and self-regulation (RTMS certification and compliance)	✓✓				✓
	Reduction in overloading by enforcing limits on axelimits and gross vehicle mass	✓✓				
	Provision of alternative routes for the transport of hazardous materials		✓✓	✓	✓	
	Optimise road, rail and pipeline freight balance	✓	✓✓			
	Separation of freight and commuter rail infrastructure to improve efficiencies in both sectors	✓✓	✓	✓	✓	✓
	Separation of freight and commuter rail infrastructure to improve efficiencies in both sectors	✓✓	✓			
Road infrastructure	Asset Management System		✓✓			
	Infrastructure Spend	✓	✓	✓	✓	✓
	S'Hambe Sonke Road Maintenance Program	✓	✓✓			
	Improve the condition of classified road network	✓	✓	✓	✓	✓
	Eradicate potholes in Urban Areas and ProvincialRoad Networks.	✓✓	✓	✓	✓	✓
	Social Investment	✓	✓✓			✓✓
Cross-border Transport	Consistent pricing for road infrastructure for each category of road		✓	✓		✓
	Operational efficiency at border posts	✓✓	✓	✓	✓	✓
	Investment in infrastructure upgrades and maintenance	✓✓	✓✓	✓	✓	✓
	Harmonised Regional Transport regulation, guidelines, and standards	✓✓	✓	✓	✓	✓
Rail infrastructure	Asset Management System	✓				✓✓
	Infrastructure Spend	✓				✓✓
	Social Investment	✓	✓			✓

Transport safety and security	The integrated strategy on Road Safety must be addressed in the respective Transport Plans, and implemented through multi-sectorial effort with private and public sectors, focusing on the highest risk factors through:	✓✓	✓	✓	✓	✓
Institutional Management: Capacity to Deliver						
	Number of professionally registered personnel in Civil Engineering, Traffic Engineering, Transport Economics, Town Planning, Urban Design, and Transport Planning, Universal Access Auditors, other unregistered professionals in areas such as Network operations management, Taxi industry negotiations	✓✓	✓	✓	✓	
Inter-Government Relations	Establishment and professional operation of the National Public Transport Regulator, Public Regulatory Entities, Transport Economic Regulator, and Transport Appeals Tribunal	✓✓	✓	✓	✓	
Transport Information Systems	Technology is a necessary tool to enhance transport planning and management. The integrated transport system is dependent on updated data systems such as Natis, Operating Licence Administration System, RAMS, Transport Modelling, etc. Therefore, the three spheres of government will ensure a fully functional and updated GIS based Land Transport Information System.	✓	✓	✓	✓	
Funding	Fully functional and updated GIS based Land Transport Information System	✓✓	✓	✓	✓	
	A life-cycle cost approach for management and preservation of assets, and proposed transport projects	✓	✓	✓	✓	✓

14.4 NATMAP 2050

14.4.1 Introduction to NATMAP 2050

The primary driver of the National Transport Master Plan (NATMAP 2050), by the Department of Transport, is "to develop a dynamic long-term and sustainable land use multi-modal transportation systems framework for the development of infrastructure facilities, interchangeterminal facilities and service delivery that is demand responsive to national / provincial/ district and / or any socio-economic growth strategies, and / or any sectorial integrated spatial development plans".

The NATMAP 2050 defined a number of overarching objectives to support its strategic intent, including the following:

- Maximising utilisation of existing infrastructure facilities.
- Development of future infrastructure facilities and improve operations.
- Development of and up to date and accurate central land use/ transportation Data Bank.
- Integrating multi-modal public passenger transportation.
- Determining the economic role of transport.
- Integration of transport and land use development.

14.4.2 Key Performance Indicators for Transport as defined in the NATMAP 2050

The KPIs as defined in NATMAP can be used additionally to those provided in the PLTSF in order for the Mpumalanga Province to suit its own pace of funding and resources.

Table 14.2 NATMAP 2050 KPIs

TRANSPORT THEMES	KPI	MEASUREMENT	TARGET
Integrated Transport Planning	Journey time to work (door-to-door) by all modes	Travel time in minutes	< hour (urban) / < 30min (rural)
	Rate of use of urban land	Per capita land use - m ² of land used / resident	% Densification (urban areas)
	Traffic network performance	Average peak-period journey speed (km/h), traffic flow rate, queue lengths, relative to a target journey speed (km/hr)	LOS D in peak hour traffic (Urban) LOS B in peak hour traffic (Rural)
	Densification of corridors and Transit Oriented Development (increase in GLA; and/or housing units) that are spatially, socially and economically integrated	GLA and/or housing units	50 projects annually delivered by the National Department of Housing
	Quality walking links to main public transport nodes in 20min or 1km radiusS	Kms	Kms of NMT network created
	Increase commuting to work trips by public transport and walking	%	1% cycling mode share in work trips by 2020
	Full cycle lane within a radius of 5km from main PT nodes	Kms	Kms of NMT network created
Public Transport	Increase in proportion of households in rural areas within about 2km of a public transport service	% of Households	40% by 2020
	Proportion of households in urban areas within 1km walking distance from an IRPTN service	% of Households	85% by 2020
	Increase commuting to work trips by public transport	% Modal share of road-based travel (mode split)	70% by 2020
	Existing service pattern	Frequency	Every 10 min during peak hour on trunk roads and rail and every 20 - 30 min during off-peak by 2020
	16 to 24 hr services, supporting hybrid service structure incorporating elements of both trunk-feeder services and direct services	Frequency	Every 5 min during peak hour on trunk roads and rail and every 10 - 30 min during off-peak by 2050
	Reliability of scheduled services	%	95%
	Implementation of approved plans and initiatives (e.g. IRPTN's)	% increase in the use of public transport	3% increase in passenger trips per mode per annum to 2020.
	Contract, operational requirements and performance specifications developed for scholar transport service providers	Performance specification	Implemented in all provinces by 2020
Environment	Greenhouse gas emissions from all road based transport	Total GHG Emission (Mt)	Reduce GHG emissions by 5% from current levels by 2020
			34% CO ₂ reduction by 2020 and 42% CO ₂ reduction by 2025
	Energy efficiency	% Improvement	12% by 2015
	Environmental education	Number of environmental awareness activities conducted	8 per annum (linked to environmental calendar)

			days)
	Air quality	Percentage of compliance with National Annual Ambient Air Quality Standards to improve air quality	100% compliance by 2030
Freight Transport	Reduction in overloading by enforcing limits on gross vehicle mass	%	Reduce average number of overloaded trucks on provincial and national roads by x%
	Improve heavy goods vehicle safety performance; roadworthiness; and self-regulation	%	% increase in RTMS certification and compliance
Infrastructure (Roads and Rail)	Preservation of national, provincial and local road infrastructure	Thousands of 2-lane-kilometers	Improve by X% from "fair" or "good" by 2020.
		Thousands of 2-lane-kilometers	Reduce road surface with very poor condition by 5% in 2025
Road Safety	Reduction in the number of crashes expressed as the number of people per 100 million vehicle kilometres	Total fatalities and injuries per 100,000km	50% reduction in the number of people killed or seriously injured in road accidents by 2025 10% reduction in fatalities year on year
Rural Transport	Improve rural access index to rural population having access to some form of transport	Transport accessibility	Improve rural accessibility to 50% by 2025
	Rural access improved to eliminate constraints on the time which all children have to participate in education	%	% of schools with reliable access
	Public transport in rural areas	% of District Municipalities implementing the Integrated Public Transport Network Strategy	Improve public transport in rural areas by 40% by 2019 against plan

14.5 KPI's for Mpumalanga 2024-2029

The following KPI's were developed from the NATMAP 2050, the MP PLTF 2013-2018, the RI-RAMS and from the Gazetted minimum requirements for ITP 2016. The source from where the KPI was obtained is identified in the table below.

Table 14-2: Mpumalanga PLTF KPI's

Transport Item	KPI	Measurement	Target	Sources
	Average travel time by all modes	Travel time in minutes	< hour (urban) / < 30min (rural)	NATMAP 2050

Integrated Transport Planning	Traffic Network Performance	Average peak-period journey speed (km/h), traffic flow rate, queue lengths, relative to a target journey speed (km/hr)	LOS D in peak hour traffic (Urban) LOS B in peak hour traffic (Rural)	NATMAP 2050
	Quality walking links to main public transport nodes in 20min or 1km radius	Kms	Kms of NMT network created	NATMAP 2050
	Increase commuting to work trips by public transport and walking	%	1% of cycling as a mode share by 2029	NATMAP 2050
	Full cycle lane within a radius of 5km from main PT nodes	Kms	Kms of NMT network created	NATMAP 2050
	Scholar Transport	%	80% of scholars with access to public transport by 2029	MP PLTF 2013-2018
	Average age of subsidised bus and commuter rail coach fleet	No of vehicles	No vehicle more than 15 years is permitted unless rebuilt or rehabilitated and No vehicle with chassis of more than 27 years even if rebuilt or rehabilitated.	MP PLTF 2013-2018
	Integrated Transport Plans	Number of LM, DM completed ITP's	All LITP, DITP and CITP completed for the planning cycle of 2024-2029	Minimum Requirements
Public Transport	Transport Register and Public Transport Plans	Number of LM, DM completed TR's and PTP	All LM and DM TR and PTP completed in the planning cycle of 2024-2029	Minimum Requirements
	Increase in proportion of households in rural areas within about 2km of a public transport service	% of Households	40% by 2029	NATMAP 2050
	Proportion of households in urban areas within 1km walking distance from a public transport service	% of Households	85% by 2029	NATMAP 2050
	Implementation of approved plans and initiatives (e.g. IRPTN's)	% increase in the use of public transport	3% increase in passenger trips per mode per annual by 2029	NATMAP 2050
	Increase commuting to work trips by public transport	% Modal share of road-based travel (mode split)	70% of road based mode share by 2029	NATMAP 2050
	Existing service pattern	Frequency	Every 10 min during peak hour on trunk roads and rail and every 20 - 30 min during off-peak	NATMAP 2050
	Reliability of scheduled services	Frequency	Every 5 min during peak hour on trunk roads and rail and every 10 - 30 min during off-peak	NATMAP 2050
Mpumalanga Province	Percentage of households spending more than 10% of disposable income on public transport	Number of households	No Households to spend more than 10% of disposable income on Public Transport by 2029	MP PLTF 2013-2018
	Subsidy and formal contracts with the percentage of bus services operating in terms of tendered or negotiated contracts	%	100% by 2029	MP PLTF 2013-2018
	Percentage of mini-bus taxi fleet recapitalised	Number of vehicles older than 15 years operating or entering the market	No vehicles older than 15 years operating or entering the market by 2029	MP PLTF 2013-2018

Traffic Safety	Reduction in the number of crashes expressed as the number of people per 100 million vehicle kilometres	Total fatalities and injuries per 100,000km	50% reduction in the number of people killed or seriously injured in road accidents by 2029	NATMAP 2050
	Number of road fatalities	Number of fatalities	10% reduction in fatalities year on year	MP PLTF 2013-2018
	Number of road traffic pedestrian fatalities	Number of fatalities	15% reduction in fatalities year on year	MP PLTF 2013-2018
Environment	Greenhouse gas emissions from all road based transport	Total GHG Emission (Mt)	Reduce GHG emissions by 5% from current levels by 2029	NATMAP 2050
	Energy efficiency	% Improvement	12% by 2029	NATMAP 2050
	Environmental education	Number of environmental awareness activities conducted	8 per annum (linked to environmental calendar days)	NATMAP 2050
	Air quality	Percentage of compliance with National Annual Ambient Air Quality Standards to improve air quality	100% compliance by 2030	NATMAP 2050
Freight Transport	Percentage of overloaded trucks on road network	%	Less 5% of trucks overloaded	MP PLTF 2013-2018
	Improve heavy goods vehicle safety performance; roadworthiness; and self-regulation	%	% increase in RTMS certification and compliance	NATMAP 2050
Rural Transport	Improve rural access index to rural population having access to some form of transport	Transport accessibility	Improve rural accessibility to 50% by 2029	NATMAP 2050
	Rural access improved to eliminate constraints on the time which all children have to participate in education	%	90% of schools with reliable access by 2029	NATMAP 2050
	Percentage of people in rural areas living 2km of access to regular public transport	%	Minimum of 80% of people in rural areas by 2029	MP PLTF 2013-2018
Road Infrastructure	The rate of increase in the average network (VCI)	%	Increase above 50% (TMH 9)	RI-RAMS 2024/2025
	The rate of increase in reseal condition index (RCI)	%	Increase above 60% (TMH9)	RI-RAMS 2024/2025
	The rate of increase in average Visual Gravel Index (VGI)	%	Increase above 33% (TMH 12)	RI-RAMS 2024/2025
	The average road user cost	R	Decrease to below R10.85 average road user cost	RI-RAMS 2024/2025
	Road projects completed on time and in budget	No.	Complete 100% of projects in time and budget	RI-RAMS 2024/2025

14.6 Summary and Conclusions

The National Land Transport Strategic Framework (2023 to 2028) and NATMAP 2050 provide two sets of Key Performance Areas and Key Performance Indicators that is totally aligned with national transport policy. However,

setting KPIs without measuring them will not achieve the transport development results that Mpumalanga Province wants.

It is thus necessary to set up a Transport Monitoring Section that will on a continuous basis measure the transport performance indexes as it was detail above. The monitoring section should best be situated within the Public Transport Directorate as many of these targets are located in this directorate.

14.7 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 14-3: Project and Strategy responsibilities

Project and Strategies description	Responsibilities				
	Local Municipality	District Municipality	Provincial	National Government	Others
Integrated Land Use and Transport Planning	x	x	x	x	
Urban Transport	x	x	x	x	
Universal Accessibility	x	x	x	x	x
Rural Transport			x	x	
Public Transport	x	x	x	x	x
Non-Motorised Transport	x	x	x	x	
Learner Transport	x	x	x	x	x
Freight transport	x	x	x	x	x
Road infrastructure	x	x	x	x	x
Cross-border Transport	x	x	x	x	x
Rail infrastructure			x	x	x
Transport safety and security	x	x	x	x	x
Institutional Management	x	x	x	x	
Funding	x	x	x	x	x

This chapter covers all objectives but focuses on ensuring objective 4 is achieved.

15 Chapter 15: Coordinating Structures, Measures, and Conflict Resolution

15.1 Introduction

In the minimum requirements for the compilation of a PLTF the requirements for the Coordination Structures Chapter are defined as follows:

- a) *Measures, where appropriate, to ensure proper co-ordination between adjacent municipalities regarding land transport;*
- b) *Measures to assist municipalities that lack capacity to carry out their planning responsibilities;*
- c) *Measures to ensure implementation of the provincial integrated development strategy, with due attention to rural areas, with the focus on less capacitated municipalities or those that do not fulfil their responsibilities in respect to transport delivery, either by direct implementation or assistance under paragraph (b) above;*
- d) *Details of existing or contemplated liaison mechanisms and structures between authorities themselves and between authorities and the private sector with special reference to the establishment by planning authorities of Intermodal Planning Committees as contemplated in Section 15, and Land Transport Advisory Boards as contemplated in Section 16, of the Act;*
- e) *Liaison structures between the three spheres of government, including the Public Transport Integration Committee established in terms of the Division of Revenue Acts, 2009 and 2010, and a description of the activities of those structures and shortcomings or challenges; and*
- f) *A summary of regulations made by the MEC in terms of section 10 of the Act.*

The purpose of this chapter is to provide the Province with the institutional roles and responsibilities as well as the institutional structures to coordinate the provincial government. A section is included in this report to indicate who is responsible for the different classes of roads passing through the Province connecting various land uses and areas.

15.2 Legal Background

15.2.1 National Land Transport Act

In the National Land Transport Act (Act 5 of 2009) there is a specific reference to the Intermodal Planning Committees in section 15 as detailed below:

Intermodal planning committees

15. (1) Every municipality that is establishing an integrated public transport network or has significant passenger rail services in its area must establish an intermodal planning committee consisting of the prescribed technical officials and prescribed representatives of rail operators, other public transport modes, users and organised business.

(2) The function of an intermodal planning committee is to co-ordinate public transport between the modes in order to achieve the objects of this Act.

In section 16 of the NLTA the establishment of Land Transport Advisory Boards is defined:

Land transport advisory boards

16. (1) A planning authority may establish a land transport advisory board with representation from government and the private sector, to advise it in relation to land transport matters.

(2) The Minister may, after consulting the relevant MECs, make regulations on the membership of such advisory boards, the appointment and qualifications for membership, procedures and frequency of meetings, and related matters.

Intergovernmental relations are being dealt with as follows in the act:

Intergovernmental relations

12. (1) A province may enter into an agreement with one or more municipalities in the province to provide for the joint exercise or performance of their respective powers and functions contemplated in this Act and may establish a provincial entity or similar body in this regard, subject to the Constitution and this section.

(2) One or more adjacent municipalities may agree on the joint exercise or performance of their respective powers and functions contemplated in this Act, or may establish municipal entities in terms of the Systems Act for this purpose.

(3) If the spheres of government cannot agree, subject to this Act, on the division of land transport functions between them, they must act in a manner and spirit consistent with the principles of co-operative government prescribed by section 41 of the Constitution and apply the provisions of the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005).

Impartiality

13. (1) The following persons and their spouses, partners and immediate family members must be impartial, have no direct financial or business interest in any sector of the public transport industry, and may not decide or adjudicate on a matter in which they have such an interest:

- (a) Members of the National Public Transport Regulator, Provincial Regulatory Entities and municipalities directly involved in dealing with applications concerning operating licences;
- (b) members of the Transport Appeal Tribunal established by section 3 of the Transport Appeal Tribunal Act, 1998 (Act No. 39 of 1998);
- (c) officials of planning authorities directly responsible for the development of integrated transport plans;
- (d) officials directly involved in the management and execution of public transport related law enforcement; and
- (e) officials operating or working at testing stations contemplated in the National Road Traffic Act,

or such a member or official who has been such person in the year prior to his or her appointment.

15.2.2 National Land Transport Amendment Act

In the land transport Amendment Act 23 of 2023 clause 15 was amended as follows:

Intergovernmental relations

12. (1) A province may enter into an agreement with one or more municipalities in the province to provide for the joint exercise or performance of their respective powers and functions contemplated in this Act and may establish a provincial entity or similar body in this regard, subject to the Constitution and this section.

(2) One or more adjacent municipalities may agree on the joint exercise or performance of their respective powers and functions contemplated in this Act, or may establish municipal entities in terms of the Systems Act for this purpose.

(3) If the spheres of government cannot agree, subject to this Act, on the division of land transport functions between them, they must act in a manner and spirit consistent with the principles of co-operative government prescribed by section 41 of the Constitution and apply the provisions of the Intergovernmental Relations Framework Act, 2005 (Act No. 13 of 2005).

Impartiality

13. (1) The following persons and their spouses, partners and immediate family members must be impartial, have no direct financial or business interest in any sector of the public transport industry, and may not decide or adjudicate on a matter in which they have such an interest:

- (a) Members of the National Public Transport Regulator, Provincial Regulatory Entities and municipalities directly involved in dealing with applications concerning operating licences;
- (b) members of the Transport Appeal Tribunal established by section 3 of the Transport Appeal Tribunal Act, 1998 (Act No. 39 of 1998);
- (c) officials of planning authorities directly responsible for the development of integrated transport plans;
- (d) officials directly involved in the management and execution of public transport related law enforcement; and
- (e) officials operating or working at testing stations contemplated in the National Road Traffic Act,

or such a member or official who has been such person in the year prior to his or her appointment.

"Intermodal planning committees

15. (1) Every municipality that is establishing an integrated public transport network or has significant passenger rail services in its area must, by not later than the prescribed date, establish an intermodal planning committee consisting of the prescribed technical officials and prescribed representatives of state-owned rail operators [other public transport modes, users and organised business].

(2) The function of an intermodal planning committee is to co-ordinate and integrate public transport [between the models], as well as all other aspects relating to the integrated transport plan of the municipality and to perform other prescribed functions in order to achieve the objects of this Act.

(3) Where there are significant passenger rail services in the area, the intermodal planning committee must facilitate the conclusion of appropriate service level agreements between the municipality and the Passenger Rail Agency as contemplated in section 11(1)(c)(xix).

(4) Where a provincial entity is established as contemplated in section 12(1), it must perform the functions of the intermodal planning committee contemplated in this section for the municipalities which are members of the entity, including the functions set out in section 11(1)(c)(xix) for those municipalities.”.

15.3 Institutional Roles and Responsibilities

Focusing on policy and strategic planning, including substantive regulation, and reducing government's direct involvement in operations and the provision of infrastructure, as indicated by Section 156(4) of the constitution, the primary responsibility for the execution of land transport functions rests with the municipal sphere of government, which includes transport authorities that are established to undertake municipal transport functions.

Subject to the constitution, the roles of the three spheres of government in relation to land transport are as follows
(Source: NLTA, 2009):

The **national sphere of government** is responsible:

- For policy and strategy formulation;
- For overall strategic transport planning and co-ordination in the national sphere, and preparing the NLTSF in terms of Section 43;
- To co-ordinate between provinces and to address arrangements between the three spheres of government and public entities;
- To allocate functions to the most appropriate sphere of government by promoting legislation and promoting or concluding agreements, as appropriate;
- To liaise with other government departments in the national sphere with portfolios that impact on transport issues and bring together key players;
- To assist provinces that lack capacity or resources and to see that gaps left by them are filled;
- To intervene where provinces fail to perform their functions, subject to section 100 of the constitution; and
- To co-ordinate transport relations between the republic and other countries and implement international agreements; and to perform the other functions of the Minister in terms of this act.

The **provincial sphere of government** is responsible:

- For more detailed provincial policy and strategy formulation;
- For more detailed transport planning and co-ordination in the provincial sphere, and preparing the PLTF in terms of Section 44;
- To co-ordinate between municipalities and transport authorities and to promote provincial legislation and municipal by-laws, and promote or conclude agreements, as appropriate, in the provincial sphere;
- To liaise with other government departments in the provincial sphere with portfolios that impact on transport issues and bring together key players;
- To assist transport authorities and municipalities that lack capacity or resources and to see that gaps left by those authorities are filled, subject to Section 139 of the constitution; and
- To perform the other functions of the MEC in terms of this act.

The **municipal sphere of government** is responsible for municipal transport functions including municipal public transport in their areas of jurisdiction, which involves primary responsibility to:

- Where appropriate, plan, implement and manage modally integrated public transport networks and travel corridors, including operational planning; and
- To integrate municipal transport planning with land use planning.

15.4 Institutional structures to coordinate provincial government

All spheres of government have some responsibility for the three key elements of the road transport system:

- Road infrastructure
- Public transport
- Traffic management

Public transport is a concurrent schedule 4A function between the national and provincial spheres. Municipal transport is a concurrent schedule 4B function falling in the local government sphere. Provincial roads and traffic are an exclusive schedule 5A provincial function. Municipal roads, traffic and parking are exclusive schedule 5B municipal functions.

The national Department of Transport's major responsibility is to set out a facilitative and regulatory policy framework for an efficient transport system. Policy is implemented through provincial departments, municipalities and agencies.

The national Department of Transport oversees the regulation and delivery of transport through several agencies. The South African National Roads Agency (SANRAL) manages the construction of national roads. The South African Rail Commuter Corporation (SARCC) is responsible for passenger rail transport services and regulation.

Other regulatory bodies include the Road Traffic Management Corporation, whose role is to enhance co-operation between the three spheres of government on road traffic management and law enforcement; the Cross-Border Road Transport Agency, which regulates cross-border passenger, freight and road transport; and the Civil Aviation Authority, which regulates air traffic and civil aviation.

In terms of the Constitution, legislative and executive powers in relation to public transport are the responsibility of the provinces. The National Land Transport Transition Act (NLTTA) defines provinces' and municipalities' responsibilities for the planning and management of land transport. The Act requires that both spheres prepare transport plans in line with the Department of Transport's framework. It also provides for the establishment of local transport authorities by municipalities to improve local transport planning and service delivery. The Department of Transport is responsible for policy formulation, monitoring and strategic implementation.

Provincial and local governments are responsible for roads within their areas. They undertake the planning, construction and maintenance of roads and bridges. Provincial departments are responsible for law enforcement on their roads, which involves overloading control, vehicle and driver roadworthiness, and speed limit enforcement. The organisational arrangements for the delivery of the transport system differ between provinces, as some have a separate transport department, which deals with roads, while in others, roads are the responsibility of their departments of public works. Municipalities enforce traffic laws within their jurisdiction, and operate driver-licensing and vehicle-testing centres on behalf of provinces.

15.5 Resolving the conflict with land-use planning

The road network in Mpumalanga has been developed and managed through three spheres of government:

- National Roads – managed by SANRAL on behalf of the National Department of Transport
- Provincial Roads - managed by Mpumalanga Department of Public Works Roads and Transport
- Local Municipal Roads and Streets – managed by district and local municipalities

Mpumalanga is directly linked with an integrated system of economic development corridors supporting regional, provincial and socio-economic development. The various regional service centres are connected to the neighbouring provinces and countries through national corridors as shown in the figure below. The corridor that is directly affected by economic development:

- The Maputo Development Corridor (MDC) as part of the Coast 2 Coast Corridor (C2C) attracting the public, as well as private investment.
- There are three major National corridors in Mpumalanga such as N4 or Maputo Corridor, N17/N2 Corridor, N11 Corridor.

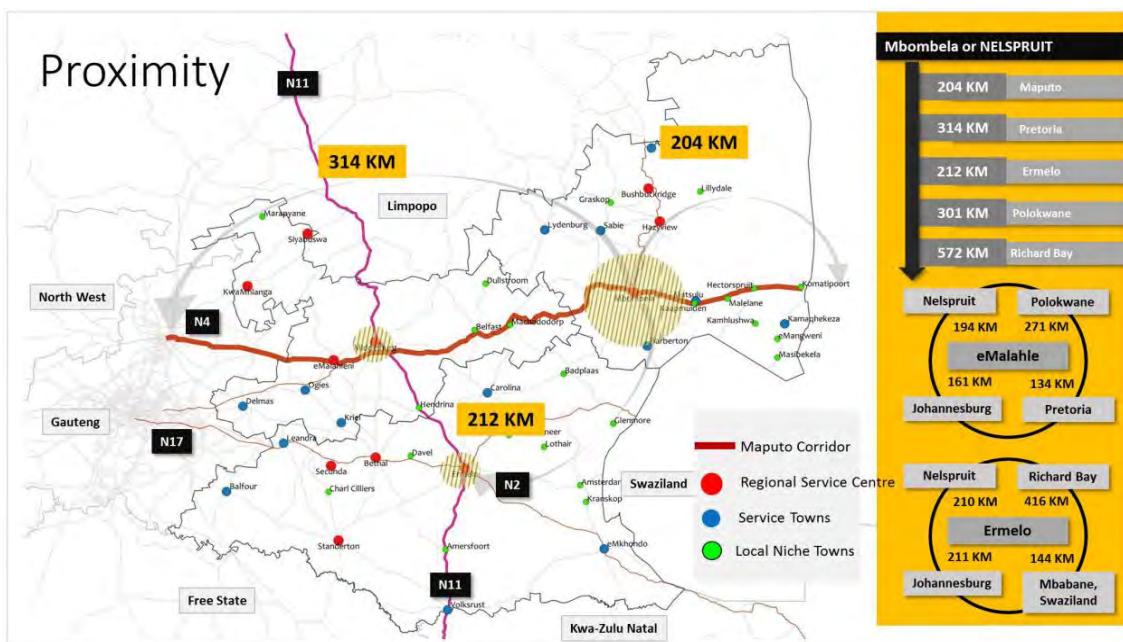


Figure 15-1: Neighbouring Cities Proximity

15.5.1 N4/N12 or Maputo Development Corridor

The Maputo Development Corridor is economic transportation corridor linking Gauteng and the Maputo harbour. The Maputo Development Corridor passes through Nkangala and Ehlanzeni Districts supporting the Maputo railway line. The corridor provides access to 8 local municipalities and their connected towns within the direct range. The corridor serves 48% of the total Mpumalanga population.

15.5.2 N17/N2 Corridor

The N17/N2 corridor serves as access corridor between South Africa and eSwatini along with the coal haulage corridor to Richard Bay. Around 20% of the Mpumalanga population is served through the N17/N2 corridor. The corridor provides 23% of the provincial economy with 1.3 % growth per annum. As per the proposed Govan Mbeki Secunda, economic activity node which is a part of petrochemical cluster provides an opportunity to produce petrochemical, chemicals, speciality chemicals and any supporting cluster.

15.5.3 N11 Corridor

The N11 is an intersecting corridor of N4 and N17/N2 at Middelburg and Ermelo and linking Limpopo and KwaZulu Natal. The corridor serves the 21% of the provincial economy and mainly caters to local economies of Steve Tswete and Msukaligwa local municipalities. The corridor is accessed by 16% of the total Mpumalanga population and employs 20% of the population.

15.6 Summary

The legal background is explicit, co-ordinating structures are to be in place to facilitate transportation planning:

- Between municipalities across municipal borders.

- Between the different spheres of government, namely the municipalities, district municipalities, the provincial Dept of Public Works, Roads and Transport and the national Department of Transport.
- Between the spheres of government and the private sector role players in the transportation industry.

In the table below a set of specific objectives are provided, which need to be implemented to facilitate the co-ordinating structures that are required for the Mpumalanga Province:

Table 15-1: Policy levers and Intervention Options

Goal	Policy Objectives and Strategic Pathways
Strengthening & improving institutional systems & governance responsiveness	<ul style="list-style-type: none"> • Position transport forums as an IDP working group. • Broaden the terms of reference of transport forums to include all modes. • Re-draw the terms of reference of transport forums to ensure sustained interest from stakeholders. • Provide mechanisms to assist municipalities that have no capacity to carry out their planning responsibilities. • Expand the terms of reference of the provincial freight forum to include other modes & ensure its efficiency as an integrative platform. • Conduct studies to advise on the advisability to establish a PMU and Monitoring Section within the DPWRT.
Capacity Building & Training	<ul style="list-style-type: none"> • Conduct district road shows on transport planning & management. • Request DOT to second transport officials to assist in capacity building in the province. • Train all district officials on the NLTA and transport amendment act.

Furthermore, each chapter that was developed for the PLTF outlines a responsibilities section that indicates the government organisation/s that is responsible for the various strategies. These can be used in developing the strategies to ensure that the Mpumalanga province transport initiatives, strategies and plans can be implemented.

15.7 Responsibilities

The responsibilities of the different strategies and projects are indicated below:

Table 15-2: Project and Strategy responsibilities

Project and Strategies description	Responsibilities			
	Local Municipality	District Municipality	Provincial	National Government
Strengthening & improving institutional systems & governance responsiveness	x	x	x	x
Capacity Building and Training		x	x	x

This chapter covers all objectives but focuses on ensuring objective 4 is achieved.

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Appendices

1. Local IDP and SDF documents
2. Integrated Transport Plans
3. RI-RAMS 2024
4. Mpumalanga Freight Transport Plan
5. Comments and Responses from Stakeholders

Appendix 5: Comments and Responses

Comments and inputs for the first draft of the PLTF 2024			
Comment By	Comment	Chapter & Page Number	Responds
Transport Management -Acting DDG	Background Cite and put a context on the general statement. MPG is smallest in terms of what.....	chapter 1 (1.3) page 2	The comment is addressed and revised in section 1.3
RAMS & Municipality Systems Support - Construction Project Manager	Programme 3: Transport Infrastructure Please make the following corrections to the sub-programmes that are part of the Transport Infrastructure Programme	Chapter 2, 2.5.1; Page 8	The sub-programmes was rectified as per the comments received by the Dept
Transport Management -Acting DDG	Coal haulage routes Description in terms of road numbers, affected municipality and condition for budgeting and grant purpose. Rail Network	Chapter 3; 3.6 (3.6.1.1)	The map with road numbers and district municipalities is added to the report with road conditions on the roads that are part of Coal haulage refer to section 3.4.1.2 and figure 3-6 & 3-7 page 51-52. For Coal Haulage strategy refer to Chapter 9; 9.6 (9.6.1) from page 216
	Rail Network Mapping passenger, coal and freight network etc, also in terms of municipality. Lines not operational e.g Majuba rail....	Chapter 3 (3.6.3) page 55	Rail Freight Corridor network is mapped in figure 3-25 page 59. Coal Network based on DoT freight bank added in page 56. ; Passenger rail network is on railway network diagram and description on section 3.6.3.2 from page 56 and visualised in figure 3-26
	Aviation Does government need info for private landing strips, advice???	Chapter 3; 3.6.5	Aviation Strategy is detailed in Chapter 10. which include the role of government on Aviation under 10.3 (10.3.1) page 234. The private landing strips do need to be capture in the Aviation chapter and need to adhere to the required aviation standards
	Overloading	Chapter 3 - 3.6.2 for Overloading Status Quo; Chapter 9 - 9.5 for Overloading Strategy	No clear comment it is just "Overloading"
	Freight/ Coal	Chapter 3 - 3.6 for Freight Network in Mpumalanga Status Quo; Chapter 9 for Transport Management Strategy	No clear comment it is just "Freight/Coal"

	Weighbridges vs count per district in terms of status quo per corridor affected and how roads are impacted where there are no weighbridges	Chapter 3 - 3.6.2 for Overloading Status Quo; Chapter 9 - 9.5 for Overloading Strategy	The Counts of weighed vehicles obtained from DoT freight Bank is tabled in table 3-26 page 55, there is no provided counts from provincial/District level about weighbridges counts the National data was used for this section. ; The overload Control strategy can be found in chapter (9.5) which also details the impact of overloaded vehicles and strategy to manage overloaded vehicle.
Public Works Roads & Transport	6.10 Operating licences are required for all public transport service vehicles, whether they are contracted or non-contracted. Provided they operating for a reward.	Chapter 6, Page 149	The document has been updated to include the Remarks that were highlighted in red.
	6.10The OLP should also describe any conditions, which should be imposed by the PRE /MRE in respect of operating licences, such as duration.	Chapter 6, Page 150	The document has been updated to include the Remarks that were highlighted in red.
	6.10.1 Legal Background-If the Operating Licence function has been assigned to a Municipality (Section 11 of the Act), then the (MRE) Municipality is responsible for deciding on applications for Operating Licences for public transport services in its area of jurisdiction.	Chapter 6, Page 150	The document has been updated to include the Remarks that were highlighted in red.
	6.10.3 Operating Licence Application Process The following specific process is being catered for in accordance with the NLTA:	Chapter 6, Page 150&151	The document has been updated to include the Remarks that were highlighted in red.
	6.10.6.1 Minibus Taxi Services Scheduled Services Unscheduled Services	Chapter 6, Page 154	The document has been updated to include the Remarks that were highlighted in red.
	3.5.2.8 Gert Sibande- Vukanini Taxi Association; should be Megabus	Chapter 3, Page 41	This part of the chapter was based on the information that was in the Gert Sibande DITP 2014
	3.5.2.8 Gert Sibande-Tilly's Bus Services which also another subsidised operator within the District in not included	Chapter 3, Page 41	This part of the chapter was based on the information that was in the Gert Sibande DITP 2014
	3.5.2.9 Nkangala-subsidised bus operators (Thembalethu and Putco) are not included	Chapter 3, Page 41	This part of the chapter was based on the information that was in the Nkangala DITP 2022
	3.5.2.10 Ehlanzeni- Buscor is on an "interim contract" not "negotiated"	Chapter 3, Page 41	This part of the chapter was based on the information that was obtained from the Mbombela CITP 2012
	3.5.2.10 Ehlanzeni- Most of Great North buses operates in Mbombela and Bushbuckridge municipality	Chapter 3, Page 41	This part of the chapter was based on the information that was obtained from the Mbombela CITP 2012
Buscor	3.5.2.1 (page 38) Please note that the statistics are incorrect. Attached find Annexure B with the types of buses in Buscor's fleet per Deot with the seating capacity next to each bus.	Chapter 3, page 33&38	The operational information from Buscor is now in the document on page 33 The statistics on page 38 were received from the dept.
	Challenges	Chapter 3, Page 36	The challenges from buscor have been included in the document.

	Buscor Termini- We have noticed that the report indicates passengers being dropped and loaded at Nelspruit or White River CBD	Chapter 3, Page 41	This part of the Chapter was based on the information that was obtained from the Mbombela CITP 2012. The paragraph was based on the surveys done during the period when the CITP was written, based on the information the loading and offloading information obtained was for all the buses operating in Mbombela, not specifically for Buscor.
	1.1.1 Overview-Percentages are not correct. It should add up to 100%. The percentages for buses is far more than what is stated. Buscor takes Censuses at least 2 times annually and we have the figures to support that.	Chapter 3, Page 26	The information that was included in the overview were obtained from the National Household Travel Survey, this information illustrates the main mode of Transport used by household in 2020.
	6.2.1.2 Bus planning in the province is challenging and concerns have previously been expressed about limited services and contracts have been in place for a long time	Chapter 6, page 132	This paragraph was not based on buscor but rather on buses in general.
	6.2.2.2 Dissatisfaction with taxi, and bus services	Chapter 6 page 134	This paragraph was not based on buscor but rather on buses and taxies in general.

PLTF Workshop: 12:02:2025

Section	Comment	Action
Chapter 2	Table 2.1 Relook at objectives for transport operations	The table was not amended. However, the objectives of the goals were further detailed in a newly added section 2.9
	Section 2.7 Conflicts between National and Provincial legislation. The taxi industry requested that the issue of subsidy be reference in this section with special reference to section 41 of the NLTA 2009 Chapter 5	This section was expended as requested and further elaborated
Chapter 6	SANTACO Indicated that the subsidy for Scholar transport was to low.	This has been added as a concern raised in the PLTF and it is contained in chapter 6
	There is a conflict regarding the lac of subsidy for the MBT industry	The update on the subsidy plan was done for section 6.11. However, it was noted that the updated subsidy policy is still in draft format.
	It was noted that the updated CITP for Mbombela can be shared with the team	This has not happened and as such the project team could not add the updated information.
	Spelling issue is section 6.20 MDOT	It was altered to DoT
Chapter 6	Why is Moloto rail corridor included if the feasibility study indicate is not feasible	The project has not yet been scrapped. There are still discussions around it and as such it is still included in chapter 6 as a significant corridor.
Chapter 7	The PLTF is very silent on Environmental issues, and Mpumalanga is a mining and agriculture province	The environmental section has been added to chapter 7

Chapter 9	The PLTF must provide some light with regards to the Lebombo Border, and also Eswatini border, to identify mitigation strategies that will avoid crisis on the borders as highlighted the MBT industry, and obviously such challenges affects the freight industry	Chapter 3 and chapter 9 contains the cross-border strategies and available data.
	Cross-border challenges: It was mentioned that freight is a major issue with cross-border movements	This is noted and, in the report,
	Surveys at the border posts should be included	The PLTF did not do any surveys.
Chpater 12	Road from Mbuzini to the Samora Machel Monument needs to be improved	Note. However, this would need to be identified in the LITP's and the DITP and then pulled into the PLTF. The PLTF is a strategic documents for the Province regarding land transport.
general	SANTACO requested a session with the DPWRT	
	The Taxi industry further identified the high charges on the N4 in the form of Tolls.	NoT indicated that this was not part of the PLTF discussion
	The Taxi industry further identified the high charges for impounded vehicles and for permits for cross -boarder transport	NoT indicated that this was not part of the PLTF discussion
	Are the projects mentioned a wish list or are they budgeted	The projects for each section comes from the existing approved data that was issued to the project team. Due to the lack of LITP's and dated CITP's and the dated Freight Study, some with list items were added. Yet these items are Gazetted requirements such as the integrated transport plans.
	In parts of the Province there is dolomite issues. Will this be addresses	Generally this is project specific as it is area specific. During design or rehab of roads, core drilling is needed and the designs could then be amended to address these issues with road construction.
	Gas pipe lines through Mpumalanga need to be relooked at	Amended and added to the report
	Trucks on the coal haulage roads pass through towns. There was a successful court order to prohibit trucks from entering Lydenburg	This was noted
	Report is too long. An executive summary is needed	Added
	Consideration of the issues raised by the Mini Bus Taxi representatives, maybe by escalating them to the HOD or MEC. As much as some of the issues raised were outside the scope of the workshop, but a concern had been registered, so it will be fair to attend to it.	This has been noted. In addition these challenges are noted in the report as concerns and challenges raised by the industry in chapter 6

Information received in the compilation of the PLTF:

Organisation	Documents received	Effective date	Contact Person	Email Address
DPWRT	PLTF(Final Draft)	2013-2018	Zandile Mbuyane	zandile.mpm@gmail.com
	FTS(Draft)	24-Nov-17	Daisy Maseko	

	APP	31-Mar-22	Daisy Maseko	daisy@mpg.gov.za
	Annual Report	2023-2024 & 2022-2023	Daisy Maseko	daisy@mpg.gov.za
	SDF	Oct-18		
	DoCSS&L	2022-2023 Financial year		
	Mpumalanga Tourism Growth Strategy	16-Nov-07		
	RI-AMP	2024-2025	Bheki W. Shabangu	
	Needs Analysis for the Mpumalanga Provincial Road Network	2019-2020		
	Nkomazi SEZ (Presentation)	Mar-24	KD Mashele	kdmashele@mpg.gov.za
	Mpumalanga Freight Databank_Draft Plan	2017		-
	Mpumalanga Freight Databank_Cargo Projection	2017		-
	Mpumalanga Freight Transport Plan	2012 - 2017		-
	Scholar Transport Study Report	Aug-17		
	Mpumalanga Vision 2030 strategic implementation framework	2013-2030		
	Status of Bus Contracts	2023	Daisy Maseko	
	Strategic Plan	2020-2025		
	PRE Info		Daiys Maseko	
	State of Road Safety in South Africa	2022	Daisy Maseko	daisy@mpg.gov.za
	SEZ Presentation		KD Mashele	daisy@mpg.gov.za
DOT	NFTS	2007	Ntombifuthi Mosime	MosimeN@dot.gov.za
	RTS	2016	Ntombifuthi Mosime	MosimeN@dot.gov.za
	NOCS	2004	Ntombifuthi Mosime	
DCSSL	5 Years Analysis	2019 - 2023	SIM Nkuna	
	State of Road Safety Report	2022		
	Mpumalanga CSSL Annual Report	2023		
Ehlanzeni District Municipality	IDP	2024-2025	TG Mkhathswa	
	SDF	Jun-10		
	DITP	June 2019-2023		
Mbombela Local Municipality	IDP	2024-2025	Siphiwe Ndou	
	SDF	2019	Downloaded	
	CITP		Daisy Maseko	
Bushbuckridge Local Municipality	IDP	2017-2022	Downloaded	
	SDF	01-Nov-10	Downloaded	
Nkomazi Local Municipality	IDP(Draft)	2024-2025(Draft)	Downloaded	

	IDP(Final)	2022-2027	Downloaded	
Thaba Chweu Local Municipality	IDP	2024-2025	Downloaded	
Nkangala District Municipality	IDP	2024-2025	Dr. Patronella Hadebe	
	SDF			
	DITP	2022-2027		
Emalahleni Local Municipality	IDP	2023-2024	SM Sibiya	
	SDF(Final Draft)	Jan-23		
Emakhazeni Local Municipality	IDP	2022-2027	V Mnisi	
Steve Tshwete Local Municipality	IDP	2024-2025	M Mkhabela	
	SDF(Final Draft)	Nov-21		
Thembisile Hani Local Municipality	IDP	2024-2025	ML Sebela	
	SDF	2014-2015		
	LITP(Draft)	2020 September	Downloaded	
Victor Khanye Local Municipality	IDP	2024-2025	Downloaded	
Dr JS Moroka Local Municipality	IDP	2024-2025	Downloaded	
	SDF	2014-2015	Downloaded	
Gert Sibande District Municipality	IDP	2022-2027	Teboho Tsotetsi	
	SDF	Dec-22	Downloaded	
	DITP	Nov-14	Teboho Tsotetsi	
	Tourism Development Sector Plan	2012		
Msukaligwa Local Municipality	IDP	2022-2027	Downloaded	
	SDF	Mar-20	Downloaded	
Pixley Ka Seme Local Municipality	IDP	2024-2027	Downloaded	
	SDF	2020	Downloaded	
Dipaleseng Local Municipality	IDP	2024-2025	Downloaded	
	SDF	2020	Downloaded	
Lekwa Local Municipality	IDP	2017	Downloaded	
	SDF	2022-2027	Downloaded	
Mkhodo Local Municipality	IDP	2022-2027	Downloaded	
	SDF	2017	Downloaded	
Chief Albert Luthuli Local Municipality	IDP	2022-2027	Downloaded	
	SDF	2017	Downloaded	
Govan Mbeki Local Municipality	IDP	2024-2025	Downloaded	
	SDF		Downloaded	

KMI	Yearly Statistics	2023	Jason Torr	jason@kmi airport.co.z a
BUSCOR	Buscor Route Study	2024-June-	Dr. N Fakude	
SANRAL	Summary Traffic Information	2019		
National Department of Transport Website	Government Notices • Goewermentskennisgewings: National Public Transport Subsidy Policy Second Draft For Comments	2024	Downloaded	Governmen t Notices



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