FETAKGOMO TUBATSE LOCAL MUNICIPALITY
INTEGRATED TRANSPORT PLAN

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PFUKANI KUSILE CONSULTING

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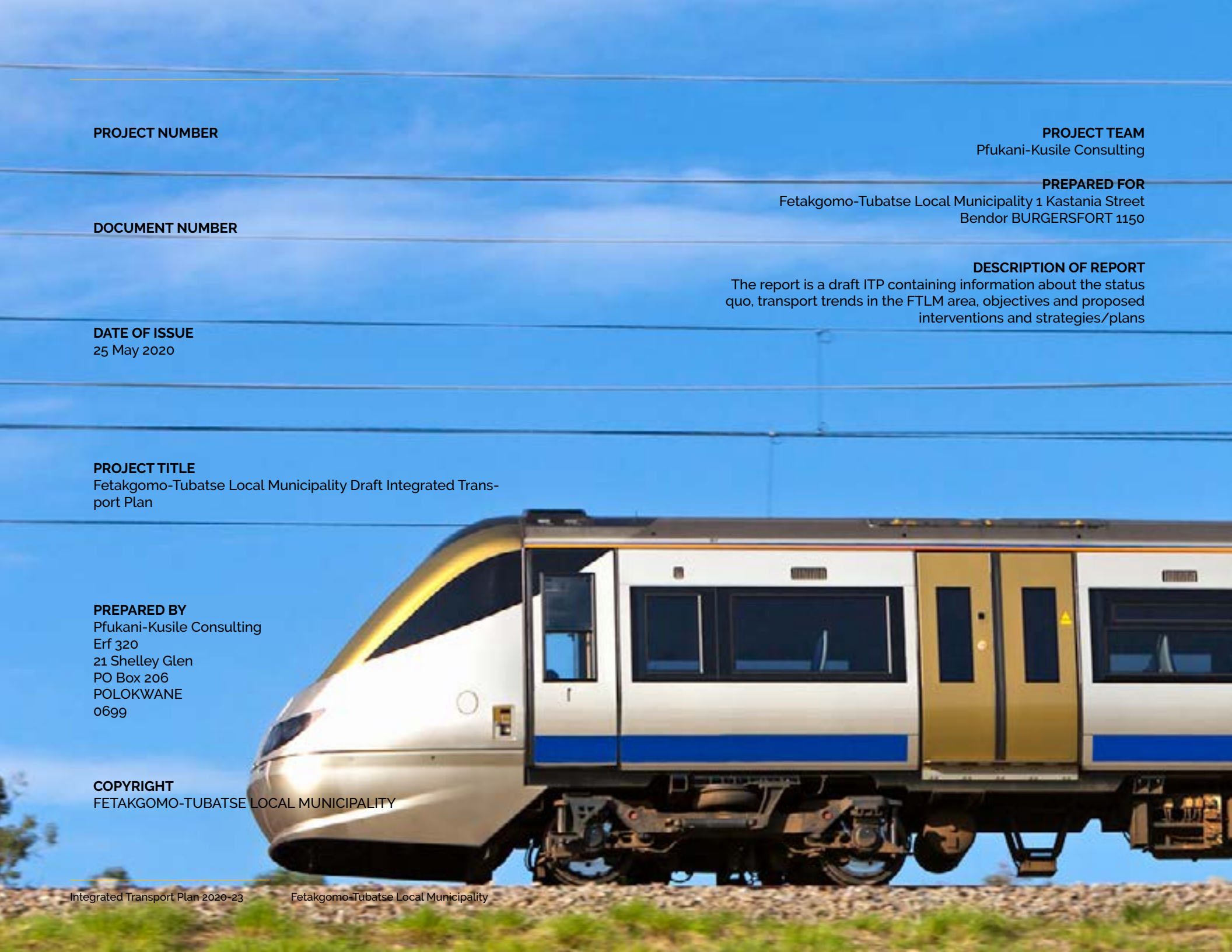
DESCRIPTION OF REPORT
The report is a draft ITP containing information about the status quo, transport trends in the FTLM area, objectives and proposed interventions and strategies/plans



Definitions

Bus – a motor vehicle designed or modified to carry more than 34 persons, including the driver.

Business marketing plan – a plan aimed at effectively managing and marketing the public transport services in the planning area.

Capacity management – the application, by a transport authority, of policies or measures to match the supply of a service (e.g. public transport) with the demand for that service.

Commuting – travelling to and from ones daily work.

Concession – the authority and contract to operate a rail line or network at an agreed price.

Contract – an agreement between an authority and an operator regarding the delivery of a public transport service at an agreed price.

Framework – an outline or skeleton which provides the structure and form around which a plan, policy or strategy is constructed.

Gazette – means the national Government Gazette. Goal – an idealised end-state of the system, or a desired direction for the evolution of the system.

Guideline – a course of action required by COLTO (Committee of Land Transport Officials (nd). to direct transport authorities at all levels of government in the preparation of integrated transport plans. Infrastructure – in relation to land transport, means fixed capital equipment and facilities in the land transport system.

Integrated Development Plan (IDP) – a plan which in terms Section 25 of Chapter 5 of the Municipal Systems Act, (32 of 2000) IDP must be prepared by a municipality.

Integrated Public Transport Network (IPTN) – a system in a particular area that integrates public transport services between modes, with through-ticketing and other appropriate measures to provide users of the system with the optimal solutions to be able to travel from their origins to destinations in a seamless manner.

Integrated transport planning – a comprehensive and integrated process for generating a plan relating to the regulation, provision and management of transport infrastructure (roads, rail, stations, terminals and public transport facilities) and for regulating public transport operations/services and the use of infrastructure by both operators of public transport and private travelers. Because of the spatial relationship between residential and economic activities, resulting in the demand for travel, it is essential that an integrated transport plan should be developed in the context of a land use plan which is supportive of efficient public transport. Details to be contained in a transport plan include public transport operations, circulation or movement and mobility needs, vehicles and rolling stock, depots/equipment and human resources.

Issue – it arises in a national, provincial or local community when there are conflicting goals and objectives (desires or perceptions) within that community.

Land transport – a generic term which describes the movement of people by land-based travel modes. It encompasses both private and public travel modes.

Land use planning – the process of determining the use or uses permissible on portions of land. The land use policies should relate explicitly to spatial relationships between broad categories of land, development densities, the mix of land uses and land use policies in support of efficient and effective public transport.

Long distance service – a scheduled or unscheduled public transport service, other than a service for commuting, which is provided beyond the boundary of the area covered by an ITP.

Metered taxi service – a public transport service operated by means of a motor vehicle which: Is available for hire by hailing, by telephone or otherwise; may stand for hire at a rank; is equipped with a sealed meter, in good working order, for the purpose of determining the fare payable and that is calibrated for such fare.

Minibus – a vehicle designed or modified solely or principally for conveying more than 16 but less than 35 persons, including the driver.

Minibus taxi – a motor vehicle designed or modified solely or principally for conveying more than nine but not more than 16 seated persons, including the driver.

Minibus-taxi service – an unscheduled public transport service operated on a specific route or routes, or where applicable, within a particular area, by means of a motor car or minibus.

Motor car – a motor vehicle, other than a motor cycle, motor tricycle or motor quadrucycle, designed or modified solely or principally for conveying not more than nine persons, including the driver.

Non-motorized transport (NMT) – includes all forms of movement that do not rely on an engine or motor for mobility, such as walking; wheelbarrows and handcarts; wheelchairs; animal drawn vehicles and bicycles, bicycle trailers and tricycles

Objective – a target, the attainment of which will help towards reaching a stated goal.

Operating license – a license required in terms of the National Land Transport Transition Act (NLTTA) of Act no 22 of 2000 authorizing the rendering of a public transport service in accordance with any preconditions as may be specified.

Permit – the authority or license to operate a public transport service in terms of current public transport policy governed by the Road Transportation Act 74 of 1977.

Planning Authority – is: (1) A transport authority for its area; or (2) The applicable metropolitan, district or local authority for any areas not situated in a transport area.

Plans and planning – a plan is a product of the process of planning which in turn is an organized method by which things are to be done. In the transport context, a plan is a vision of the desired future conditions, a set of objectives to achieve the vision, policies to regulate the transport system, strategies, actions and projects to implement the plan and a financial statement and budget.

Policy – an adopted framework or basis for the action needed to overcome identified problems and achieve stated goals and objectives.

Problem – an unfulfilled or unattained goal or objective.

Public transport – the conveyance of people for reward (a fare) by any travel mode, for example car, metered taxi, minibus-taxi, bus, coach, tram, and rail (light or heavy).

Rail service – a public transport service operated on a rail track or electro-magnetic guideway, and includes both light and heavy rail.

Requirement – an obligation demanded by the Department of Transport [published separately as Transport Planning Requirements (TPR)]

Scheduled service – a public transport service operated by road or rail on a particular route or routes by timetable. Strategy – a plan or programme of action to be taken in terms of a policy. Such action may often take the form of a series of projects.

Subsidiarity – the devolvement of functions to the lowest sphere of government where such functions can be administered most effectively.

Subsidized – in relation to public transport services, is a situation where passengers are provided with financial assistance to be able to afford services that they would not be able to otherwise.

Tendered contract – the authority to operate a public transport route or network at tendered contract rates.

Timetable – a published document informing passengers of headways (that is intervals between departures or the passing of vehicles), or times when and places where public transport services are available; indicating at least origin and destination points and significant intermediate locations along the route.

Traffic management – the application of engineering measures such as "traffic calming" and/or road marking, road signs and traffic signals to regulate the use of road space and the speed and flow of traffic. Engineering measures could be supported by economic measures, including the application of road user charges (parking fees, road tolls and entry levies). W hatever combination of engineering and economic measures is applied to traffic management, the measures should be supported by effective law enforcement.

Travel Demand Management (TDM) – is a system of actions to maximize the capacity of the transport system for the movement of people and goods rather than vehicles. For instance through increasing vehicle occupancy, developing priority measures for public transport, encouraging travel during off-peak periods, shifting demand between modes, restricting the space available for parking, adjusting the price of parking, and other appropriate measures.

Unscheduled service – is a public transport service operated by road on a particular route or routes, or (where applicable) within a particular area, without a timetable, and for which passengers are charged fares individually.

Vision – a commonly shared view of future conditions.

ABBREVIATIONS

AARTO-,Administrative Adjudication of Road Traffic Offences Act 46 OF 1998
ACSA – Airports Company South Africa
AFC – Automated Fare Collection System
APTMS Advanced Public Transport Management Systems
ATIS – Advanced Traveler Information Services
CPTR – Current Public Transport Records
EPWP – Expanded Public Works Program
FTLM – Fetakgomo- Tubatse Local Municipality H
OV – High Occupancy Vehicle
IDP – Integrated Development Plan
ITP –Integrated Transport Plan
ITS – Intelligent Transport System
KPI – Key Performance Indicators
LITP – Local Integrated Transport Plan
MEC – Members of the Executive Council (or MECs) are responsible for the various departments of the provincial administration.
MIG – Municipal Infrastructure Grant, Road Fund
MINMEC – National Minister of Transport & Provincial MEC's
MSA Municipal Systems Act (32 of 2000)
NATMAP – National Transport Master Plan (2050, 2011)
NDOT – National Department of Transport
NDP National Development Plan (2030, 2012)
NEMA – National Environmental Management Act 107 OF 1998
NLTA – National Land Transport Act 5 of 2009
NLTSF – National Land Transport Strategic Framework 2006-2011
NMT – Non-Motorized Transport
NRTA – National Road Traffic Act (Act No. 93 of 1996)
NSDP – National Spatial Development Perspective
OLS – Operating License Strategy
PAJA – The Promotion of Administrative Justice Act 3 OF 2000
PIG – Provincial Infrastructure Grant
PLTF – Provincial Land Transport
PMS – Pavement Management System
PTIFG – Public Transport Infrastructure Grant
PTISG – Public Transport Infrastructure and Systems Grant (NDoT Conditional)
PTP – Public Transport Plan
RatPlan – Rationalization Plan,
RTSSA – Rural Transport Strategy of South Africa, 2007
SABS – South African Bureau of Standards
SACAA – South African Aviation Authority
SANCB – South African National Council for the Blind
SANRAL ACT – The South African National Roads Agency Limited And National Roads Act 7 Of 1998
SARTSM – South African Road Traffic Signs Manual, 2012
SDF – Spatial Development Framework
SDM – Sekhukhune District Municipality
TDM – Transport demand management
TGSI – Tactile Ground Surface Indicators
TMC – Transport Management Centre
TNF – Taxi Negotiation Forum
TSM – Transport System Management
UN – United Nations
UNCRPD – Convention on the Rights of Persons with Disabilities
UTC – Urban Traffic Control

LITP

EXECUTIVE SUMMARY

Fetakgomo-Tubatse Local Municipality

Overview of the Local Integrated Transport Plan

In terms of section 36(1) of the National Land Transport Act, 2009, (Act No. 5 of 2009), the Minister of Transport has published minimum requirements and guidelines for the preparation of Integrated Transport Plans (LITP's). This Local Integrated Transport Plan (LITP) that has been developed in accordance with the requirements of the National Regulations for the preparation of Local Integrated Transport Plans published by the Minister of Transport in terms of the minimum content and form. Fetakgomo -Tubatse Local Municipality (FTLM) is required to prepare a Type 3 Local Integrated Transport Plan every five years and to update it annually.

To meet those requirements the preparation of the LITP has been based on sound research of the status quo of the planning and provision of integrated transport services and facilities within the FTLM. The document provides an overview of the current transport situation, identified transport needs and the strategies required to address these needs.

Land Transport Vision, Mission, Goals and Strategy

The development of the vision, goals and strategies for the FTLM ITP took into account current transport policies and legislation, but also the Fetakgomo- Tubatse Integrated Development Plan as well as other municipality development strategies to inform the municipality's transport vision, mission, goals and strategies.

Vision

"A developed Platinum City for a sustainable human settlement"

Active Mines

Mission

The mission of the FTLM is to promote:

- Accountable through active community participation;
- Economic advancement to fight poverty, inequality and unemployment;
- Render accessible, sustainable and affordable service;
- Municipal transformation and institutional development; and
- Sustainable livelihoods through environmental management

Transport objectives

Former Greater Tubatse Transport Objectives are adopted to form a broad FTLM transport objectives:

- To develop, co-ordinate, implement, and manage an integrated, multi-modal transport system;
- To act as a catalyst for social upliftment and economic growth;
- To ensure that the system is balanced, equitable, and non-discriminatory; and
- To ensure that the system is reliable, effective, efficient, safe, accessible, affordable, and environmentally friendly

Transport Register

The Transport Register covers the full spectrum of data collection necessary for the planning of all types of transport infrastructure and operations, which includes the following:

- Intersection Traffic Counts;
- Taxi/Bus Utilization Surveys;
- Freight Counts;
- Demographic and Socio-economic Profile;
- Passenger Travel Behavior and Service Level Requirements;
- Land Use Information;
- Public Transport Infrastructure;
- Public Transport Organizational Profile;
- Public Transport Operations by Mode including: Bus;
- Minibus Taxi;
- Metered Taxis;
- Commuter Rail;
- Air Transport

Spatial Development Framework

Spatial Development Framework chapter gives an overview of the spatial considerations in FTLM from an urban planning perspective of land use policies. The FTLM Spatial Development Framework (FTLM SDF) was summarized in the LITP to show the development patterns, future growth direction and land use proposals in the FTLM that may have an impact on the LITP proposals. One of the main priorities of this framework include "Integration of Land Use and Transport Development". The objectives of particular importance to this project and that will have an impact on the spatial urban form are:

- Develop transport infrastructure in accordance with the recommendations of the FTLM ITP;
- Focus urban development along major public transportation routes to establish transport corridors;
- Implement a reliable and affordable public transport system; and
- Align land use planning with the proposed municipal transport planning initiative.

The following was considered:

- Broad land use and growth direction in the main municipal nodes
- Broad land use and growth direction in the main municipal nodes
- Future extension areas outside of the above mentioned nodes
- Preparation of maps indicating the location of these key projects
- Future development proposals that will have an influence on the transportation system; Important aspects of the FTLM SDF; and
- Gaps within the FTLM SDF.

Transport Needs Assessment

This chapter focus on the needs as identified by the Transport Register, Household Travel Survey, the information from the municipal plans / policies /strategies / programmes, the Integrated Spatial Development Plan and consultation with FTLM representatives and location roads and planning and development planners in the FTLM area. The needs assessment shows the present problems and needs that will be translated into projects for prioritization.

The transport needs assessment contained in the LITP focuses on the following key factors:

- Measures to promote public transport;
- The needs of learners and persons with disabilities;

- Non-motorized transport; and
- Private transport and travel demand estimation.

A comprehensive review was done on the public transport system, management of the public transport infrastructure, intersections in the CBD areas that needs to be signalized and how to manage transport safety. Also the analysis was done on the future growth areas and township development trends that would require transport infrastructure around it. Analysis of the Limpopo, Sekhukhune District, Fetakgomo -Tubatse Household Survey data focused on the needs raising from origin-destination patters, availability of different modes of public transport, satisfaction with public transport including the scholar transport.

As no demand modelling was done with software for the LITP, the process of identifying needs areas relied heavily on stakeholder participation and the feedback to estimate the demand, which is described in detail in Stakeholder Consultation.

Public Transport Operational Strategy

The aim of the Public Transport Operational Strategy is to address the current and future person trip needs as identified in Chapter 5: Transport Needs Assessment. The strategy has been prepared in accordance with the National Land Transport Transition Act: Minimum Requirements for Preparation of Integrated Transport Plans (Regulation 1119 of 2007).

Furthermore, the Public Transport Operational Strategy is required to pay adequate attention to:

- The needs of learners;
- The needs of special needs passengers;
- Developing and implementing the integration of public transport services in and between modes; and
- Measures to promote public transport over private transport.

The following public transport system elements were considered:

- Scholar transport;
- Minibus-taxi transport;
- Bus transport;
- Non-motorized transport and universal access; and
- Public transport facilities.

This chapter also provided information about the Operating License Strategy (OLS). This includes an overview of regulatory entities and operating license issuing offices, as well as status quo of licensing in FTLM which shows the oversupply of the minibus-taxi licenses and the undersupply of the scholar transport licenses. The plan for rationalization of the minibus taxi and bus service for the Fetakgomo-Tubatse Local Municipality is part of the Sekhukhune District Municipality (SDM) Rationalization Plan, 2013.

Infrastructure Strategy

The Transport Infrastructure Strategy deals with the development and maintenance of all types of transport infrastructure (major roads, public transport facilities, rail infrastructure and traffic signals) within FTLM. It includes measures which are aimed at giving priority to public transport, and a plan for the movement of hazardous substances. This chapter also includes proposals made for new infrastructure and for the improvement of existing public transport facilities and major roads.

This section elaborates on infrastructure requirements as outlined in the proposed corridors networks. The networks should be modelled with future proposed developments as well as with the High Occupancy Vehicle (HOV) lanes. The future proposed road network has to be constructed in support of the future developments aimed at improving connectivity and alleviation of congestion.

As part of the LITP there are list of the roads that were identified after the consultation process with FTLM and various stakeholders as the one which are listed as “the ones with the highest priority” and the ones “which will respond the best to the future demand”. These roads are plotted on the updated land uses with newly proclaimed developments in the new SDF. The map of the roads that would require upgrades with additional lanes to accommodate future demand will also be provided.

The chapter also summarizes all roads construction projects for Fetakgomo-Tubatse Local Municipality.

Travel (Transport) Demand Management

Travel Demand Management (TDM) refers to the various strategies that can be put in place to encourage sustainable transport and also to maximize the efficiency of the transport system. The main aim of TDM is to reduce the use of private vehicles by reducing the number of private vehicle trips and trip lengths while supporting the demand for person trips. TDM strategies are aimed at promoting and prioritizing the use of public transport while discouraging private vehicle use.


Tsidintsing
Sehunyane
Penge
Moroke
Kgoponeng
Apel
Ga-Nkoana
Ga-Malepe
Tickiedraai
Ga-Mashabela
Ga-Mashishi
Ga-Malatji
Ga-Podile
Tswenyane
Modimolle
Ga-Selala
Morulaneng
Geluk
Matokomane
Magalane
Mohlolo
Mabotsha
Mahlasi
Seakhutswana
Kgotlopong
Alverton
Mahubahuba
Motlailane
Moponong
Kgautswane
Mogodumo
Ga-Mawane
Ga-Mamphahlane
Legabeng
Mangabane
Burgersfort
Steelpoort
Ohrigstad
Ga-Phasha
Ga-Mpuru
Ga-Mampuru
Tubatse
Ga-Malekana

The chapter analyzed what has been implemented in other cities and provided TDM actions and directives that are deemed to be implementable in the Fetakgomo- Tubatse area. However, a recommendation was that full TDM Strategy report would need to be prepared so that it can properly guide the TDM implementation.

Freight Logistics Strategy

The economic growth of Fetakgomo- Tubatse is mainly built around the mining industry which represents the bulk of freight in the precinct. Therefore, efficient and effective transportation of freight is a vital element in planning for growth.

The strategy listed the freight routes that were identified in previous ITP, but it identified upgrades and/or rehabilitation that are required to support those proposed freight routes. Freight routes and upgrades and/or rehabilitation are considered as very important to support the development of a freight ring road. The freight ring road will limit the movement of heavy vehicles in the CBD, but will stimulate freight logistic capabilities around the CBD. Also, it creates the opportunity to establish a logistics hub at the airport in the future. The strategy also dealt with law enforcement aspects such as congestion control, overload control and extending the number of weighbridges as well as issues around licenses for transportation of hazardous materials.

Other Transport Related Strategies

This section of the LITP deals with the development of strategies pertaining to parking, non- motorized transport, public transport safety and security and airports.

Development of the parking strategy was highly informed by the parking policy that was identified as a need during the planning for the introduction of the ITP inception and ToR. ITP proposed road expansions will have a direct influence on the parking capacity in the CBD in the short term as many on-street parking bays will be removed. However the implementation of the system aims to decrease the parking required in the CBD in the longer term through the provision of a good public transport system that should encourage its use as an alternative to using a private car.

In order to propose parking strategy the following guiding principles was applied, namely:

Consider relevant policy, legislation, by-laws and town planning scheme requirements;

- Provide adequate parking guidance as a method to effectively manage parking; Optimization of parking at certain locations in order to reduce travel demand;
- Provision of paid on-street parking;
- Utilization of parking provision to promote public transport and park-and-ride facilities.

Non-Motorized Transport (NMT) has been identified as a priority area at national, provincial and local government level. It has now reached the stage where it is accepted, promoted and prioritized as a feasible and sustainable mode of transport. A key concept that goes hand in hand with NMT is Universal Access (UA). To develop NMT strategy the following was considered:

NMT status-quo (mode split and cycling potential);

- Interventions that can be considered in FTLM (improved infrastructure pedestrian and bicycle, traffic calming etc.);
- Areas where the NMT should be prioritized (around public transport-intermodal facilities, marginalized area, linkages between nodes, educational facilities etc.).

A map will be prepared that highlights planned NMT projects together with the current and proposed land uses. It is recommended that an Access Plan be developed for the area under requirements from the National Department of Transport (NDoT). Passengers with special categories of need are required by law to be accommodated on all new infrastructure developments and upgrades. The UA strategy has to heavily be informed by the Universal Design Access Plan for FTLM.

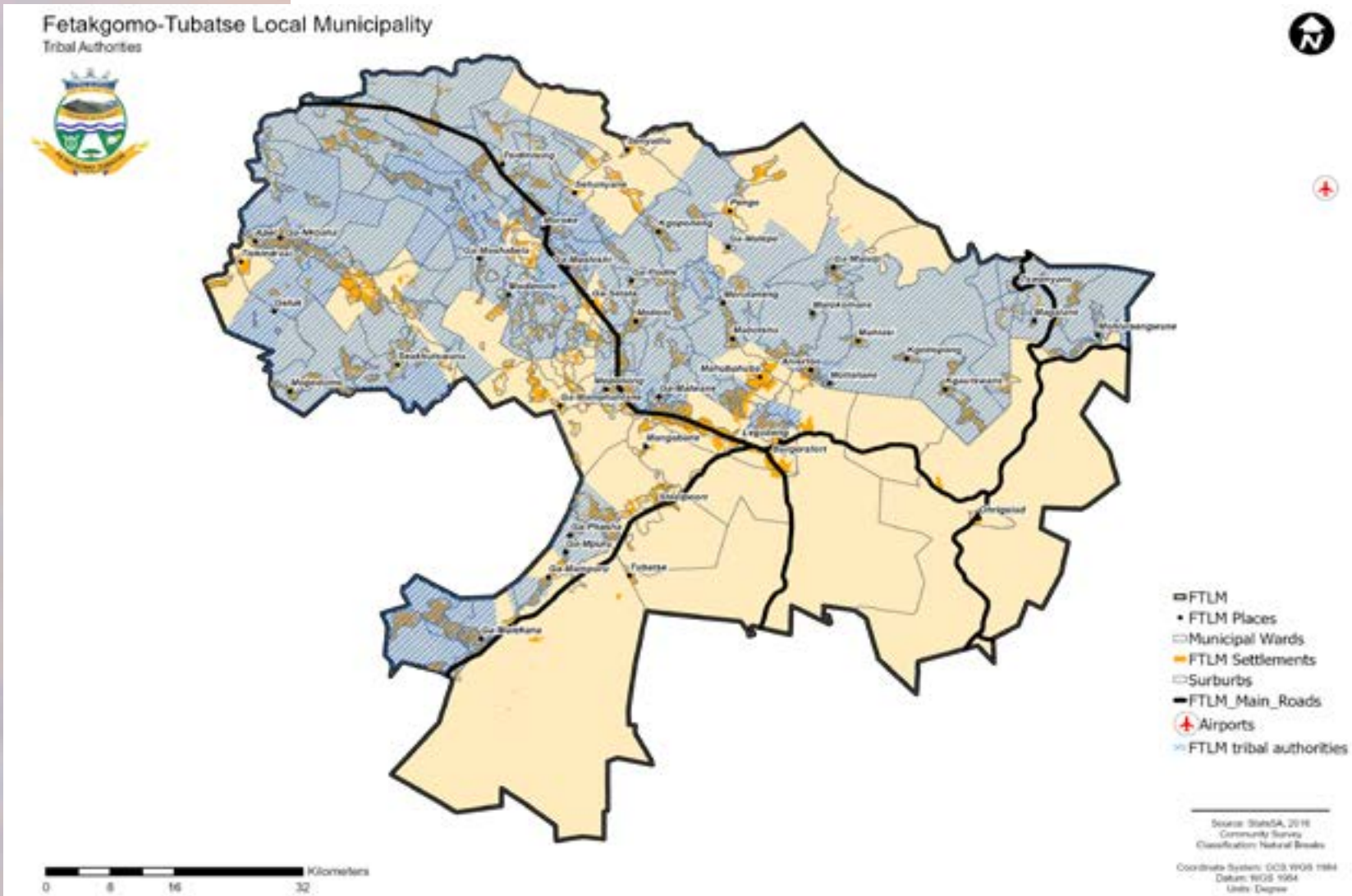
Public transport safety and security should promote passenger safety and security in respect of operations at public transport facilities and on board Public Transport vehicles. The main aim of a Safety and Security Strategy is to provide on-board and on-street safety and security measures for commuters. The strategy is not focusing on specific routes alone, but rather provides a comprehensive approach that supports practical interventions for public transport safety and security.

As such, the strategy is a comprehensive and fully integrated plan that addresses all aspects of traffic engineering, enforcement and education on an integrated basis in an effort to reduce the social and economic costs associated with accidents. This strategy assists in establishing the priorities that acknowledge the importance of addressing safety issues in both the public and private transport systems.

Funding Strategy and Summary of Proposals & Programmes It is a requirement that this chapter contain a summary of proposals and programmes provided for in the plan. The proposals contained should be realistic either in financial terms or with regard to the capacity of the authority. Projects should also be phased over a

Chapter One

Contextualizing the Fetakgomo-Tubatse Local Municipality



FETAKGOMO-TUBATSE LOCAL MUNICIPALITY

1.1 Introduction

Transportation planning is evolving in South Africa as is the case with spatial systems. It worth noting that the evolution of transport policy and legislation is not rapid like spatial transformation. At the same time, given that the land use planning and transport planning are manifestly interrelated – the need for improved transportation planning and system is not surprising. Transport planning in South Africa became a statutory planning activity with the enactment of the Urban Transportation Act (Act 78 of 1977) together with Road Transport Act (Act 74 of 1977). The Urban Transport Act 78 of 1977 providing for urban transport plans was superseded by the National Land Transport Transition Act (Act 22 of 2000) that formed the basis for IDPs by acknowledged need to accommodate such policy change. In the timeline of land transport policy and legislation framework a period leading to 2000 Act provided a preparative transformation brought about by Constitution (1996). A number of statutory policies were published starting with the White Paper on National Transport Policy (1996) and Moving South Africa (Vision 2020) (1998).

Section 36 of the National Land Transport Act, (Act No. 5 of 2009) requires preparation of the Integrated Transport Plan (ITP). Pfukani-Kusile Consulting has been appointed by Fetakgomo-Tubatse Local Municipality (FTLM) to undertake the development of Integrated Transport Plan (ITP) within its area of jurisdiction utilizing applicable legislative frameworks in June 2019.

1.1.1 Scope of Services

The contents of this ITP are in line with the Technical Transport Planning Guidelines for Local Integrated Transport Plans to be prepared by Type 3 Planning Authorities, 2009. Table 1.1 contains an outline of the project steps, as well as method statements and resulting deliverables produced during each stage of this ITP project, some of which were conducted in parallel and others consecutively.

Steps	Method statement
1	Project initiation / inception and mobilization resulting in an Inception Report detailing the project execution and deliverables.
2	Executive summary An executive summary was drafted containing information about the status quo, transport trends in the FTLM area, objectives and proposed interventions and projects.
3	Introduction/context The legislative and other compliances and responsibilities related to the preparation of the ITP were investigated. The institutional and organisational arrangements responsible for the functioning of FTLM were described, as well as the liaison/ communication mechanisms to coordinate the transport planning function with other responsibilities of FTLM and those of other stakeholders. As per the ToR stipulation this chapter also investigated the demographics of Fetakgomo- Tubatse Local Municipality in relation to Sekhukhune District Municipality as well as population per ward. More specifically, distinction was made between the following types of information: geographic location and settings and demographic and socio-economic: population and profile of population in terms of income, age and education, and migration and economic characteristics – as these factors influence the future demand for transportation and infrastructure. **Deliverable: Chapter 1: Introduction**
4	Transport vision and objectives The vision statement for transportation in the FTLM area was updated within the framework of the White Paper on National Transport Policy of 1996, and guided by the relevant national, provincial and municipal transport policy. The vision statement is a concise statement guiding short-, medium- and long-term transport development in the FTLM area. Specific, measurable and realistic objectives were formulated giving effect to the vision statement. A legal compliance audit with respect to transportation planning and related matters was performed. The risks of non-compliance for FTLM were highlighted where applicable. **Deliverable: Chapter 2: Transport vision and objectives**
5.	**Transport register (transport data collection)**

The outcomes of surveys currently being conducted for FTLM were obtained and relevant information assessed, extracted and included in the LITP, with a view to identifying possible gaps to be addressed in order for FTLM to fulfill its local; transport planning and operations function. Particularly relevant are:

- Household Travel Survey;
- Rationalization Plan;
- Operating License Strategy;
- Freight Logistic Strategy;
- Parking Policy.

More specifically, distinction were made between the following types of information:

- Transport demand and supply: Modal split between private, public (by mode) and non-motorized transport. Relevant information (such as levels of dissatisfaction with public transport) to be extracted from the National Household Travel Survey.
- Public transport system and services: supply and demand information being extracted from the current public transport surveys, i.e.:
  - Supply;
  - Demand based on household travel survey data;
  - Utilization from existing surveys.

Deliverable: Chapter 3: Transport Register

6. Spatial development framework

The transport proposals contained in the Spatial Development Framework (SDF) for FTLM were integrated into the LITP. The current FTLM SDF is clearly showing the existing and intended transport corridors and nodes, and areas earmarked for mixed land use and densification. The IDP was summarised within this Chapter.
Deliverable: Chapter 4: Spatial development framework

7. Transport needs assessment

The Transport needs of the community was described based on an analysis or interpretation of:

- Spatial Development Framework (Chapter 4)
- Transport Register (Chapter 3);
- Household Travel Survey;
- Non-Motorised Transport (NMT) study; and
- Existing public participation/involvement and stakeholder feedback

Deliverable: Chapter 5: Transport needs assessment

8. Public transport operational strategy

The OLS from the District was used as a basis for developing this Chapter. The following information/data was sourced from existing FTLM initiatives:

- Routes;
- Vehicle numbers/fleet plans;
- Schedules;
- Fare systems;
- Modal Integration Strategy;
- Strategic Public Transport Network;
- Transport Infrastructure Plan;
- Road Master Plan;
- Learner Transport Information

Deliverable: Chapter 6: Public transport operational strategy

9. Transport infrastructure strategy

The integrated transport infrastructure strategy is based on existing information being available as part of developing/updating roads programmes/plans strategies for FTLM, and covers the development and maintenance of all types of transport infrastructure, including major roads and public transport facilities. The transport infrastructure strategy promotes practical and economic measures aimed at giving priority to public transport over private transport.

Deliverable: Charter 7: Transport infrastructure strategy

10. Travel (transport) demand management

Appropriate, practical and financially viable measures aimed at managing transport demand were identified and analysed, including Intelligent Transport Systems (ITS) and Transport System Management (TSM) measures.
The following were considered when formulating the Travel Demand Management Strategy for FTLM:

- Status quo analysis of travel demand measures in, and external to, the FTLM area;
- Needs assessment regarding the implementation of travel demand measures;
- Alignment with external initiatives by SANRAL and other Authorities; and
- Implementation/action plan for rolling-out travel demand measures in FTLM.

Deliverables: Chapter 8: Travel (transport) demand management

11. Freight transport strategy

A Freight Transport Strategy was formulated covering both road- and rail- based routes. The Freight Transport Strategy also covers the movement of hazardous substances

The development of the Freight Transport Strategy covers the following:

- The movement of hazardous substances by road;
- An status quo audit and analysis of freight movement within the FTLM (desire lines);
- Overloading control strategy and plan;
- A strategy to reduce the impact of overloading on the municipal road networks; and
- The identification of desire lines or freight movement and the development of an implementation plan to support.

The Freight strategy developed supports future growth in the region and surrounding areas. The freight plan includes the following:

- Freight road network;
- Freight rail network;
- Freight hubs or development areas; and
- Limited classified counts to understand the type of vehicles per class and possible freight categories.

Deliverable: Chapter 9: Freight transport strategy

12. Other transport-related strategies

The following strategies were reviewed:

- Non-Motorised Transport (NMT);
- Public transport safety and security strategy; and
- Parking Policy.

Deliverable: Chapter 10: Other transport-related strategies

13. Funding strategy and summary of proposals and programmes

The flowing aspects were covered:

- Summary of proposals;
- Funding strategy;
- Prioritisation of projects;
- Budget per project and programme;
- Strategic action plan covering a 20-years planning horizon; and
- 5-years more detailed and prioritised implementation plan to guide future budgetary allocations.

Deliverables: Chapter 11: Funding strategy and summary of proposals and programmes

14. Stakeholder consultation and public participation

The following key stakeholders will be consulted:

- Mayoral Committee;
- Portfolio Committee Councillors;
- Councillors and general public through regional workshops (two workshops);
- IDP forum if planning is synchronized;
- Other LITP consultative meetings;
- Public Transport Operators (using available forums and workshops);
- Business stakeholders (if necessary); and
- Developers Forum (presenting outcomes at forum meetings).

Individual discussions were held with relevant FTLM departments to source inputs and secure buy-in and ownership, i.e. :

- Department Development Planning;
- Department Public Safety;
- The IDP Office; and
- Technical Services and Infrastructure Development

Contact was also made with the Sekhukhune District/Regional Offices, i.e. the Roads, Transport and Civil Works Department.

Deliverable: Chapter 12: Stakeholder consultation and public participation

1.1.2 Purpose of the Integrated Transport Plan (ITP)

Transport and access are critical to the success of any municipality and the quality of life for its residents given the South African history of spatial disintegration. Many aspects of transport such as public transport and management of arterial roads are not directly under the control of municipalities in South Africa. However, municipalities play a critical role in ensuring that the needs of its residents are considered in their respective regions.

The Integrated Transport Plan provides strategic direction for municipalities to undertake this role to best meet the needs of its residents. The Plan aims to achieve this through:

- a series of visions, missions and objectives relating to transport to aid National, Provincial and Local Government in the decision making process;
- a series of projects aimed at maximizing movement (access) and opportunities for Local, Provincial and National Government collaboration with relation to transport.

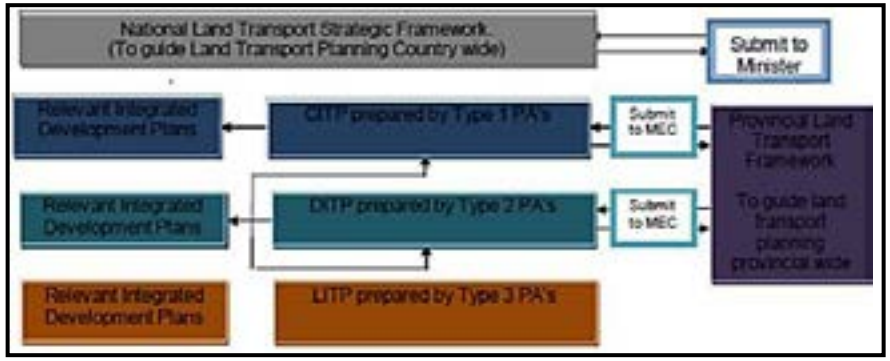
The Plan focuses on effective integration and collaboration with the District, Provincial and National Government to deliver positive transport outcomes for FTLM. A core premise of the ITP is its realization that both provision of Transport and access are critical to the success of any municipality and the quality of life for its residents given the South African history of spatial disintegration. Municipalities play a critical role in ensuring that the needs of its residents are considered in their respective regions

New infrastructure and better use of existing infrastructure are key to achieving its outcomes. Furthermore, the challenging economic times, and population growth, community's unique diversity and new technology are among salient factors that point out to a need to formulate this ITP. Amongst the outcomes, it is expected that this ITP can improve livability in a more equitable manner, for example, in terms of improving access to jobs, education, health and recreation.

The need for, and comprehensiveness of plans, varies vastly from one area to another and, thus, distinguishes between three types of municipal transport Planning Authorities (PAs) on the basis of the size of their area of jurisdiction and the extent of transport taking place in the particular area. The three types of plans are the Comprehensive Integrated Transport Plan (CITP), District Integrated Transport Plan (DITP) and Local Integrated Transport Plan (LITP). District Municipalities are categorized in terms of the Minimum Requirements for the Preparation of Transport Plans as Type 2 Planning Authority (PA). Type 1 Planning Authorities are larger municipalities designated by the Department of Transport to upgrade their public transport system to a level that is car competitive as part of the approved Public Transport Action Plan of March 2007. These authorities have to prepare CITPs for which separate guidelines are available. All other DMs are categorized as Type 2 PAs and are required to prepare DITPs. Type 3 Planning Authorities are the Local Municipalities and they are required to prepare Local Integrated Transport Plans. The LITPs are the least comprehensive of the three and they are incorporated or summarized within the relevant DITPs.

1.2 Relationship between FTLM ITP and other Statutory Plans

Transport plans and frameworks are required to be prepared by all three levels of Government as mentioned above. Figure1.1 shows the inter- relationship between the National Land Transport Strategic Framework (NLTSF), the Provincial Land Transport Framework (PLTF) and the different types of ITPs.



1.2.1 National

The NLTSF provides national policy and an overarching transport strategy. It also includes national planning initiatives such as the National Transport Master Plan, National Public Transport Strategy and Action Plan, National Rail Plan and the National Freight Logistics Strategy. The most recent NLTSF is 2014, and gives guidance on transport planning and land transport delivery by national government, provinces and municipalities. The framework also addresses implementation mechanisms and measures for monitoring the implementation of the NLTSF by means of key performance indicators. The Sekhukhune District Municipality's District ITP and LITP should be in line with the NLTSF initiatives and should also take into account the planning initiatives and proposed projects of agencies such as the South African National Roads Agency Limited (SANRAL), Airport Company of South Africa (ACSA) and the Road Traffic Management Corporation (RTMC).

1.2.2 Province

Each Province prepares a PLTF for a five year period with two primary objectives: firstly, to create a strategic framework for developing transport with a provincial

perspective; and secondly, to co-ordinate all the ITPs for the province.

A PLTF must be prepared in accordance with minimum planning requirements as gazetted in Regulation Gazette No. 34158, dated 1 April 2011. It is important to note that the PLTF must include a chapter on coordination measures and structures, liaison and conflict resolution. This chapter must, inter alia, include measures to ensure proper coordination between the transport plans of planning authorities, and between planning authorities and the province. It should also include a short description of existing and planned liaison structures between the province and planning authorities, working groups and coordination committees, and their terms of reference.

Section 3(2) (a) of the minimum planning requirements states that in preparing the PLTF, the MEC must be guided by the NLTSF.

(b) Plans must pay due attention to the development of rural areas;
(c) Non-motorized forms of transport must be taken into account;
(d) Transport for special categories of passengers must receive special attention;
(e) The Integrated transport planning process must be continuous, i.e. plans must be updated continuously;
(f) The PLTF must be synchronized with other planning initiatives and must indicate how it is integrated into provincial transport and land use planning process.

Generally, the Member of the Executive Council (MEC) has the responsibility to coordinate the planning processes in the province and, in terms of Section 6(b) of the NLTTA Amendment Act, Act 26 of 2006, must ensure that all plans address:

- Public transport services operating across the boundaries of PAs;
- Road and rail networks;
- Freight movements;
- Needs of special categories of passengers; and
- Rivalry between neighboring PAs that may result in duplication or over-supply of infrastructure and services;

The integration of transport and land-use planning.

1 LITP Focus on the identification of needs and annual programme and budget

1.2.3 Municipality

Each Municipality (Planning Authority) prepares an ITP. Each type of ITP must inform the relevant authority's Integrated Development Plan (IDP), and must be reflected in the PLTF. The different types of PAs, the type of ITP to be prepared by each and how the different plans relate to each other, is explained below.

Planning Authority	ITP Prepared
Type 3 Planning Authority	The Local ITPs are summarized and included in the relevant DITPs. LITPs are not submitted directly to the MEC.
Type 2 Planning Authority	The completed DITP is submitted to the MEC to be reflected in the PLTF
Type 1 Planning Authority	The Comprehensive ITP is submitted to the MEC to be reflected in the PLTF.

Table 1.2: Different types of PAs and ITPs to be prepared

1.3 Frequency of Plan Preparation and Update

The minimum frequency of ITP preparation and updating is shown in Table 1.3 which includes reference to the preparation of a CPTR and an OLS. These two planning activities are to be performed normally by Type 1 and Type 2 planning authorities, and not by local municipalities categorized as Type 3 planning authorities. Type 3 planning authorities may assist a Type 2 planning authority with the preparation of a CPTR or OLS for its own area through mutual agreement and approval by the MEC

PLAN	FREQUENCY		COMMENTS
	PREPARATION	UPDATE	
Comprehensive ITP (CITP) and district ITP (DITP)	Total Over-haul every 5th year	Annually, in synchro-nization with IDP	Update to focus on action programme and budget; Prerogative of PA to do more compre-hensive update
Local Inte-grated Transport Plan (LITP)	Annually, in synchronization with IDP		Focus on the identification of needs and annual programme and budget
CPTR (forms part of ITP)	Total over-haul every 5th year	Continuous (if required)	Update to concentrate on gaps and information of poor quality
OLS (forms part of ITP)	Total over-haul every 5th year	Continuous (if required)	This should be a live document reflecting any CPTR update or the issuing of OLs by the OLB

RatPlan (where required: forms part of ITP)	Total overhaul every 5th year	Continuous (if required)	Update to ensure the objectives of rationalization are realized

Table 1.3: Minimum Frequency of Plan Preparation and Update

The CPTR, OLS and Ratplan do not exist for FTLM, but however these documents exist for the SDM as aforementioned they are function of type 1 and 2 PAs. Interims of the ITP for Fetakgomo -Tubatse and the Sekhukhune documents will be referenced and some additional data will be collected as detailed in the Scope of Services. The CPTR data is also used to prepare other plans required by the NLTTA such as the public transport plans (see Chapter 6).

1.4 Outline of the Integrated Transport Plan (ITP)

1.4.1 Replacement of Previous Requirements

The document entitled Integrated Transport Plans: Minimum Requirements in Terms of The National Land Transport Transition Act, 2000 (Act 22 of 2000) as published in the Government Gazette No R. 1119 of 30 November 2007 replaces the following documents:

- Current Public Transport Record: Minimum requirements in terms of the National Land Transport Transition Act, 2000 as published in the Government Gazette on 24 July 2003 under General Notice No 1085 of 2000;
- Operating License Strategy: Minimum requirements in terms of the National Land Transport Transition Act, 2000 as published in the Government Gazette on 1 August 2003 under General Notice No 1090 of 2003;
- Integrated Transport Plan: Minimum requirements in terms of the National Land Transport Transition Act, as published in the Government Gazette on 1 August 2003 under General Notice No 1092; and
- Rationalization Plan: Minimum requirements in terms of the National Land Transport Transition Act, as published on 1 August 2003 under General Notice No. 1091.

Prior updating ITP as per the minimum statutory plan required by the National Land Transport Act No. 5 of 2009 the requirement for the previous ITP has to be analyzed.

ToR Proposed Chapters		FTLM Chapters	
1	Chapter 1: Introduction	1	Chapter 1: Introduction
2	Chapter 2: Transport Status Quo Analysis	2	Chapter 2: Transport Vision And Objectives
3	Chapter 3: Transport Needs Assessment	3	Chapter 3: Transport Register
4	Chapter 4: Transport Improvement Proposals	4	Chapter 4: Spatial Development Framework
5	Chapter 4: Implementation Budget And Programme	5	Chapter 5: Transport Needs Assessment
6	Chapter 6: Public Transport Plan	6	Chapter 6: Public Transport Operational Strategy
		7	Chapter 7: Transport Infrastructure Strategy
		8	Chapter 8: Travel Demand Management
		9	Chapter 9: Freight Transport Strategy
		10	Chapter 10: Other Transport-Related Strategies
		11	Chapter 11: Funding Strategy and Summary of Proposals and Programmes
		12	Chapter 12: Stakeholder Consultation And Public Participation

Table 1.4: Chapters alignment

1.4.1 Replacement of Previous Requirements

The document entitled Integrated Transport Plans: Minimum Requirements in Terms of The National Land Transport Transition Act, 2000 (Act 22 of 2000) as published in the Government Gazette No R. 1119 of 30 November 2007 replaces the following documents:

- Current Public Transport Record: Minimum requirements in terms of the National Land Transport Transition Act, 2000 as published in the Government Gazette on 24 July 2003 under General Notice No 1085 of 2000;
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- Rationalization Plan: Minimum requirements in terms of the National Land Transport Transition Act, as published on 1 August 2003 under General Notice No. 1091.

1.5 ITP in Relation to the Phases of the IDP Process

The preparation of an ITP must be synchronized with the IDP process. The suggested time frame for the development of an IDP is 37 weeks. The following table proposes the minimum alignment requirements per IDP phase. In view of the normal IDP timetable, this means that a CITP or CITP update should be completed by December of the year prior to plan implementation. For municipalities, this is July of the following year.

It should therefore be noted that the ITPs should be prepared in order for them to be available at the integration stage of the IDP which is proposed to be Week 28 to the end of Week 32 (See Table 1.5).

PHASE	DESCRIPTION	ITP SECTION OF THE IDP SHOULD INCLUDE THE FOLLOWING
I	Analysis	• Provide a summarized assessment of the status quo of transport. • Identify the key priority issues/ problem statements relating to transport and discuss briefly the nature/ dynamics/ causes of these priority/ problem issues
II	Strategies	Identify mid-term objectives for each priority issue identified in Phase 1 and then develop strategies (strategic options) for each priority issue.
III	Projects	From the abovementioned strategies, identify projects and for each project compile a project proposal which specifies the following: • Project objectives and indicators for achieving these objectives; • Project outputs, targets and locations; • Project tasks/ activities, responsible agencies and timing; • Project costs including budget estimates and sources of finance; • Remarks, if any.
IV	Integration	Work with the IDP Steering committee to ensure that projects: • Are in line with strategic guidelines, objectives and resource frames; • Reflect people's priority needs; • Are planned in a cost-effective manner; and • Can be implemented in a well-coordinated manner. • Revise project proposals, if required.
V	Approval	Part of the IDP approval process by Council

Table 1.5: Overview of how the ITP must be integrated with the IDP

This ITP was awarded in time for alignment with the IDP Process. The findings from this ITP will be used in the update of the IDP.

1.6 Phased Approach

On the basis of the Terms of Reference the project was broken down into phases due to its magnitude and complexity, as follows:

- Phase1: Status Quo Report;
- Phase 2: Analysis, Projections, Strategies, Budget;
- Phase 3: Comments and Feedback;
- Phase 4: Public Participation.

1.6.1 Phase 1: Describing the Status Quo of Transport for FTLM

Phase 1 includes all data collections and survey activities, data capturing and documentation of the status quo data. The following chapters of the ITP were developed in parallel to the data collection process:

- Chapter 1: Introduction
- Chapter 2: Transport vision and objectives
- Chapter 3: Transport Register
- Chapter 4: Spatial Development Framework
- Chapter 5: Transport Needs Assessment (based on the household travel survey)

The information contained in the register will enable the Department to fulfill its obligations, as defined by the NLTA in terms of:

- Identifying problems and issues;
- Assessing the present and future demand for public transport and infrastructure;
- Preparing an Operating License Strategy and Rationalization Plan; Preparing a Network Operational Plan;
- Monitoring the Key Performance Indicators of the transport system.

The Operational Plan, OLS and Ratplan development falls within the scope of PFUKANI-KUSILE CONSULTING appointment, and Chapter 6 and Annexures provide the information and the summary of the existing plans. As aforementioned these plans are the function of District Municipality – Local Municipalities are discouraged to prepare these documents for its own area to avoid repetition/duplication or possible distortion of information or over-supply of infrastructure and services unless through mutual agreement and approval by the MEC. Therefore, SDM has developed these documents

– as set out in Table 1.2 the following will ensue:

- CPTR will be updated to fill in gaps and information of poor quality;
- OLS will reflect on CPTR update or the issuing of OLs by the OLB; and
- Ratplan will be updated to ensure the objectives of rationalization are realized

1 "The findings from this ITP will be used in the update of the IDP

1.6.2 Phase 2: Analyses, Projections, Strategies and Budget

Following a thorough understanding of the Status Quo information, the data is analyzed to identify and quantify problems, issues and needs. Demand modeling was excluded from the proposal. However, future development will be evaluated in the FTLM area.

After analysis the focus will be on Transport Strategy development:

- Chapter 6: Public Transport Operational Strategy
- Chapter 7: Transport Infrastructure strategy
- Chapter 8: Travel Demand Management Strategy
- Chapter 9: Freight Logistic strategy
- Chapter 10: Non-Motorized Transport Strategy
- Chapter 11: Funding Strategy
- Chapter 12: Stakeholder consultation

1.6.3 Phase 3: Comment and Feedback

The FTLM will comment on the report and the feedback will be incorporated into the final report.

1.6.4 Phase 4: Public Participation

Public participation will be scheduled for the month following the final approval of the draft ITP report. Approved feedback will be incorporated into the final document.

1.7 Institutional and Stakeholder Arrangements

The following are the institutional structures in the FTLM.

1.7.1 Political

The following is the political structure that gives political guidance and direction for FTLM:

- Mayor;
- Speaker;
- Chief Whip;
- Executive Committee Members;
- Proportional Representative Councilors
- Ward Councilors
- Portfolio committees established following the provisions of Section 79 and 80 of the Municipal Systems Act of 2000:

Section 79 Portfolio Committees:

- Rules Committee
- Oversight Committee
- Audit Committee
- Municipal Public Accounts Committee
- Town Planning Committee
- Geographic Names Committee
- Petition and Ethics Committee

Section 80 Committees

- Finance Committee
- Corporate Services Committee
- Economic, Land and Development Committee
- Technical Services Committee
- Strategic Planning Committee
- Executive Support Committee

The transport function falls under the Section 79 Portfolio Committee: Town Planning Committee – (Planning and Development).

1.7.2 Administrative

The following is the administrative structure that is responsible for administration for the FTLM:

- Budget and Treasury
- Corporate Services
- Community Services
- Municipal Manager
- Development Planning
- Technical Services and Infrastructure Development
- Local Economic Development and Tourism
- Apel Director

1.7.3 Inter-departmental Co-ordination and Liaison

The FTLM has established a cluster system which is responsible for inter-departmental co- ordination and liaison.

1.7.4 FTLM Stakeholders

The following are stakeholder of FTLM as identified by its IDP 2018:

- Traditional Leadership;
- Traditional Healers;
- NGO's
- Mining Houses;
- Youth Formations;
- Disabled Communities;
- Sekhukhune District Municipality;
- Government Sector Departments;
- Community in general;
- Various Political Parties;
- Civic Organizations

1.7.4.1 Stakeholder Consultation

The following is a brief description of the ITP stakeholders in FTLM.

Operator Associations (Minibus-Taxi, Bus, Rail, Freight)
The minibus-taxi forum has been established to deal with matters related to the taxi industry and for liaison with other relevant authorities in FTLM. The formation of this forum includes various organized Taxi Associations in FTLM. There are also bus organized Bus Operators though informal. This LITP requires that members of taxi associations and buses operators to mandate their leadership represent their respective associations' best interests of the minibus taxi and bus industry in the rollout of this ITP. These representatives that form part of FTLM Transport Forum must engage the project in its entirety and from the perspective of the entire taxi sector (public transport). In terms of section 11(1) (a) of the NLTA, the national government is responsible for the operating licensing function, and this can be assigned to the Province, some selected Metros / Municipalities qualify to administer the Licensing of Operators. The function is currently being undertaken by the Limpopo Department of Transport and Community Safety

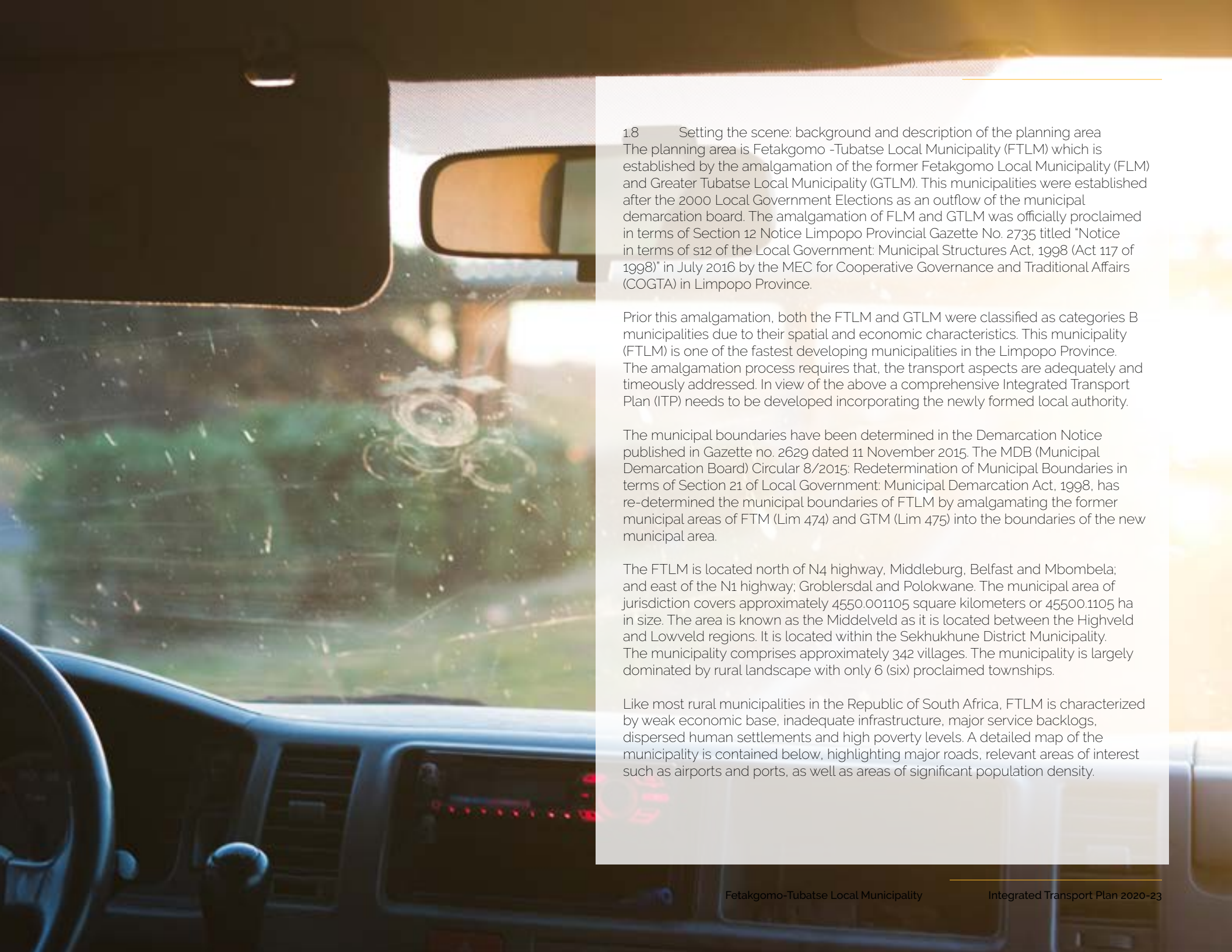
– this includes to issue operating licenses for minibus taxi, bus, scholar transport and contracted services like mines transporting their own people.

Passenger Organizations
There are no passenger organizations that exist in the area.

Educational Institutions
There are no educational institution organizations that deal with transport issues.

Special Interest Groups
There is a hawker organization which is responsible for coordinating hawker related activities in the Burgersfort area.

Employer/Business Organizations
There is the mining sector forum



1.8 Setting the scene: background and description of the planning area

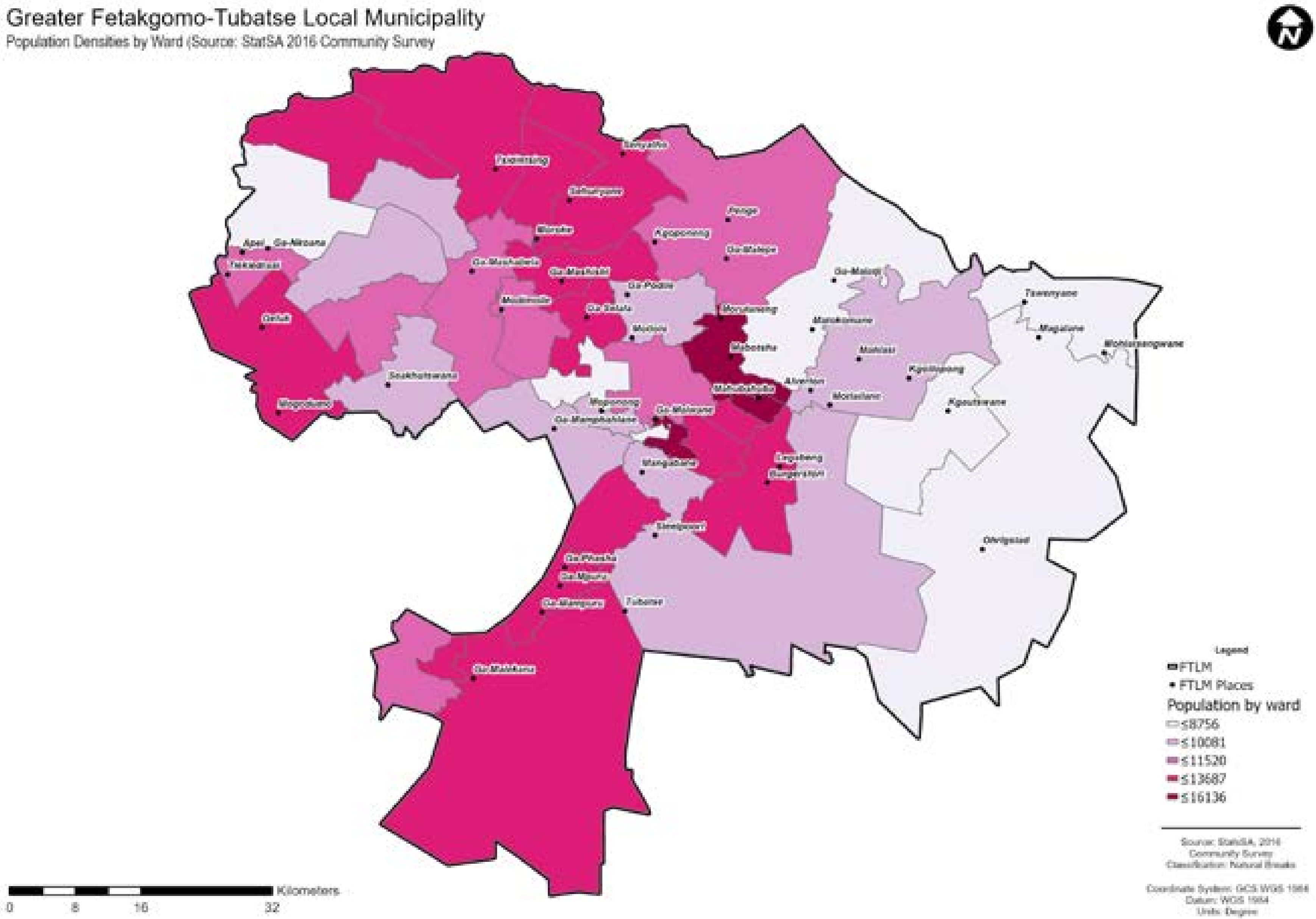
The planning area is Fetakgomo -Tubatse Local Municipality (FTLM) which is established by the amalgamation of the former Fetakgomo Local Municipality (FLM) and Greater Tubatse Local Municipality (GTLM). This municipalities were established after the 2000 Local Government Elections as an outflow of the municipal demarcation board. The amalgamation of FLM and GTLM was officially proclaimed in terms of Section 12 Notice Limpopo Provincial Gazette No. 2735 titled "Notice in terms of s12 of the Local Government: Municipal Structures Act, 1998 (Act 117 of 1998)" in July 2016 by the MEC for Cooperative Governance and Traditional Affairs (COGTA) in Limpopo Province.

Prior this amalgamation, both the FTLM and GTLM were classified as categories B municipalities due to their spatial and economic characteristics. This municipality (FTLM) is one of the fastest developing municipalities in the Limpopo Province. The amalgamation process requires that, the transport aspects are adequately and timeously addressed. In view of the above a comprehensive Integrated Transport Plan (ITP) needs to be developed incorporating the newly formed local authority.

The municipal boundaries have been determined in the Demarcation Notice published in Gazette no. 2629 dated 11 November 2015. The MDB (Municipal Demarcation Board) Circular 8/2015: Redetermination of Municipal Boundaries in terms of Section 21 of Local Government: Municipal Demarcation Act, 1998, has re-determined the municipal boundaries of FTLM by amalgamating the former municipal areas of FTM (Lim 474) and GTM (Lim 475) into the boundaries of the new municipal area.

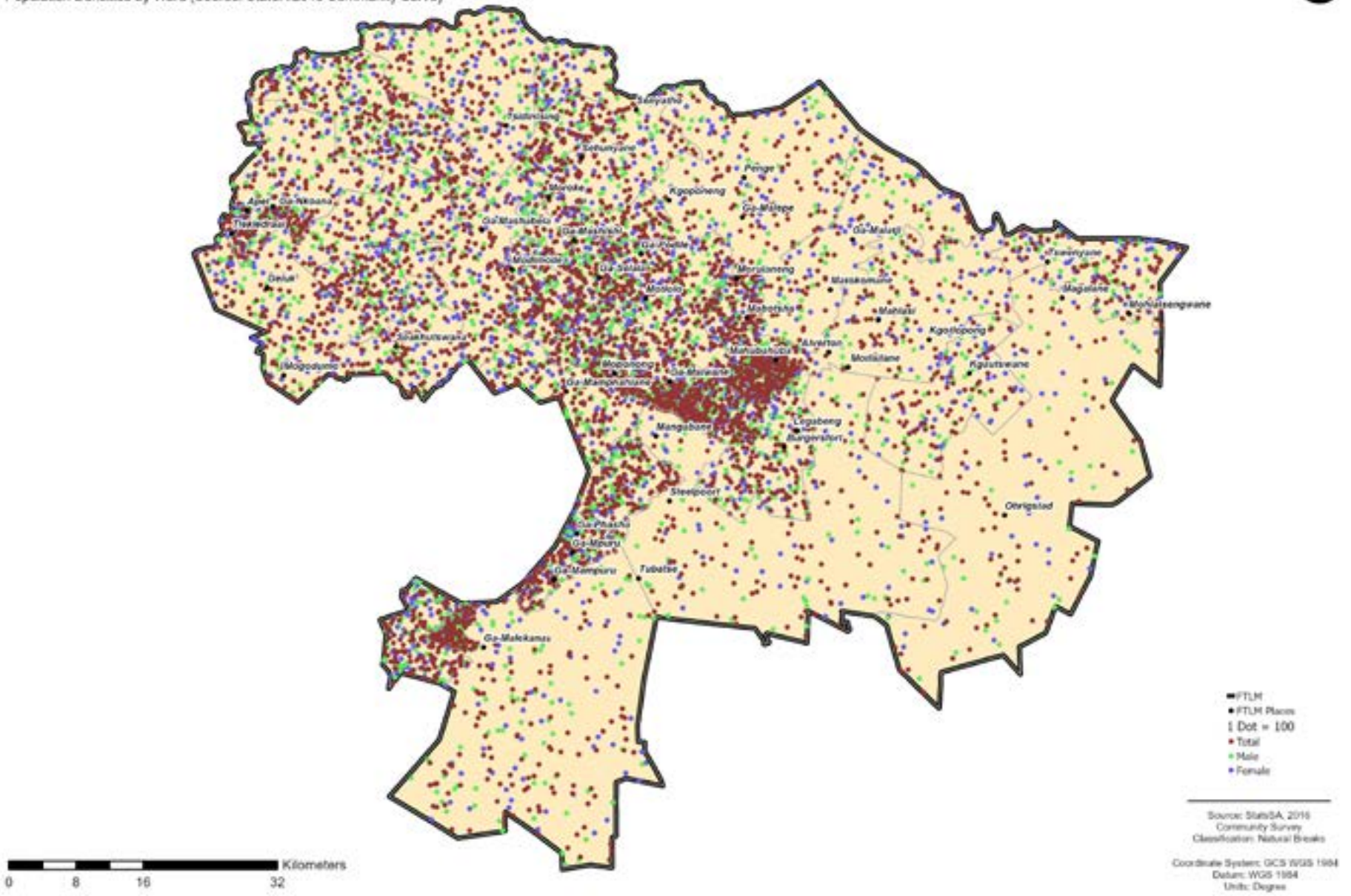
The FTLM is located north of N4 highway, Middleburg, Belfast and Mbombela; and east of the N1 highway; Groblersdal and Polokwane. The municipal area of jurisdiction covers approximately 4550.001105 square kilometers or 45500.1105 ha in size. The area is known as the Middelveld as it is located between the Highveld and Lowveld regions. It is located within the Sekhukhune District Municipality. The municipality comprises approximately 342 villages. The municipality is largely dominated by rural landscape with only 6 (six) proclaimed townships.

Like most rural municipalities in the Republic of South Africa, FTLM is characterized by weak economic base, inadequate infrastructure, major service backlogs, dispersed human settlements and high poverty levels. A detailed map of the municipality is contained below, highlighting major roads, relevant areas of interest such as airports and ports, as well as areas of significant population density.


Greater Fetakgomo-Tubatse Local Municipality
Population Densities by Ward (Source: StatSA 2016 Community Survey
Apel
Ga-Nkoana
Tukakgomo
Sefoffotse
Ga-Mashabela
Mohlaletse
Ga-Selala
Ga-Podile
Mooiloo
Moroke
Kgopaneng
Pelepe
Ga-Malepe
Moroyaneng
Ga-Maroga
Mecklenburg
Steelpoort
Ga-Phasha
Ga-Mpuru
Ga-Mampuru
Tubatse
Burgersfort
Mangabane
Alverton
Motlailane
Kgoshigong
Kgautswane
Ohrigstad
Taweneyane
Magalane
Mohlopongwane
Ga-Malekana
Legend
FTLM
FTLM Places
Population by ward
≤8756
≤10081
≤11520
≤13687
≤16136
Kilometers
0
8
16
32

Greater Fetakgomo-Tubatse Local Municipality

Population Densities by Ward (Source: StatSA 2016 Community Survey

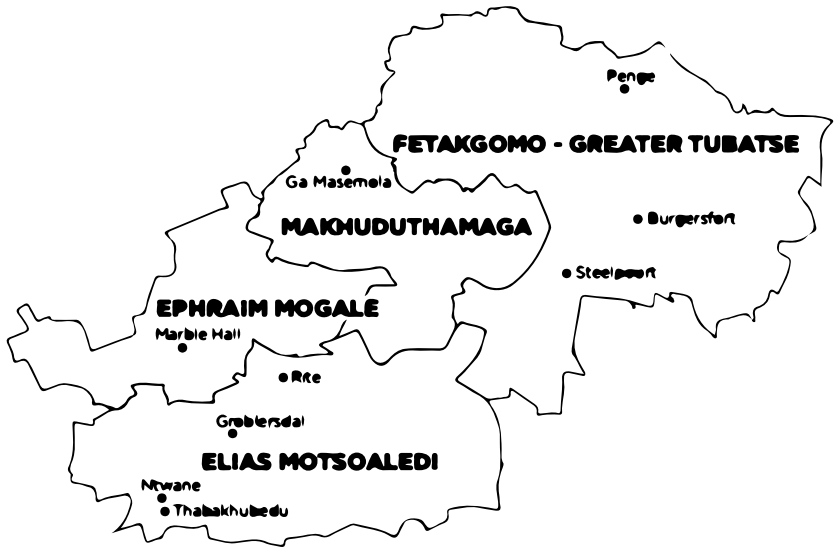


Ward No.	Villages/ Town/Town-ships	No. of House-holds	% of Municipal Total	Gender		Type of dwelling (e.g. shacks, traditional houses)
				Fe-male	Male	
01	Mapareng, GaMabelane, Makgalane, Newstands, Maepa, Ma-kopung, Ohrigstad, Mokutung, Malaeneng, Manthibi	3 521	2%	7 249	5 172	Shacks, Traditional ,RDP
02	Longtill, Tukakgomo, Tukakgomo 2Molawetsi,Ga-Ragopola, Mahlak-wena, Legabeng, Phapong	6300	3.1%	13 385	11815	Shacks, Traditional, RDP
03	Ga-Mmakopa, Tsereng (Pukubjane and Senthlane), Mapulaneng, Ga-Phasha, Ga- Tebeila, Maroteng Tsate, Selotsane, Molalaneng , Leswaneng, Matebeleng, Mogolwaneng, Shushumela, Maebe, GaMatjie, Makola, Lekgwarapeng, Rite, Sekateng.	3615	2%	8730	3377	Traditional, shacks and RDP houses
04	Mpita, Matsianeng, Riba Cross	6688	3%	13400	13352	Shacks, Traditional ,RDP
05	Pomping and Thabaneng, Polaseng, Morewane, Madithongoane, Madiseng, Sethokgeng, London, Stasie, Mandela 1 and 2, Man-dela Lepakeng, Mmmandela Crossong, Sedibaneng.	12000	6%	22450	21550	Shacks, Traditional ,RDP
06	Nazareth new stand, Ga-nkgetheng, ka-motseng, sethokgeng, potas, ditenseng, mokgethi, maraganeng, maribiri, magaseng, monare, Dipolateng.	8342	4.2%	17200	16168	Shacks, traditional dwelling, brick
07	Legononong, Gowe, Kampeng, France, Boitumelo, Hollong, Mash-emong, Tsidintshi, Mogoleng	3220	2%	6540	6340	Shacks, Traditional
08	Diphale, Seuwe, Magabaneng, Madikane, Modimole, Mantsakane	4297	2%	8600	8588	Shacks and informal settlement
09	Sehunyane, Shaking, Thokwane, Malokela ,Ga-Phala, Modubeng,	2314	1.1%	4784	4472	Shacks Traditional
10	Tjate, Ga Mongatane, Maakgake, Tidintitsane, Dithabaneng, Makgopa Serafa ,Madifahlane	1751	1%	3635	3369	Shacks and Brick
11	Garagopola, Legabeng, Ga-Maroga/Phalatseng, Ga-Morethe, Digab-ane Morokadieta, Sekiti, Molongwane, Mooihoek	5295	3%	10196	10984	Shacks, Traditional RDP
12	Ga-Mamphahlane, Swale, Ga-MpuruMahubane Crosson, Sehlaku, Molongwane, Mashibishane, Balotsaneng Komana, Matimatjatji, Hwashi/ Difagate	3165	1.5%	6430	6230	Shacks, traditional, dwelling, brick houses
13	Praktiseer, Praktiseer Ext 2-10 and 15, Tshwelopele Park, Ramaube	16 865	9%	28400	29060	Shacks, Wood, Traditional, RDP
14	Moroke, sekhutlong, magobading, Motloulela, habeng, moshira, Ga-Mathule	4435	2%	2210	2225	Shacks and Traditional
15	Ditwebeleng, Kgwete, Shakung, Masete Morapaneng, Mashishi	11 846	6%	27 777	20 183	Brick house, shacks & RDP
16	Kgopaneng, Maakubu, Mokgotho, Malepe, Maretlwaneng, Mamogolo ,Lefahla, Motshana, Moraba ,Penge	3 289	2%	6300	6856	Shacks, Traditional , RDP

17	Mahlokoane, Manyaka, Maapea, Mphethi ,Selala	5450	3%	10223	9622	Shacks, traditional dwelling, brick houses
18	Burgersfort Town,Manoke Village, Aapiesdoring	3280	2%	8 746	4 373	Town Houses, Rental Rooms Shacks and Traditional, RDP
19	Magologolo, France park, legabeng, motaganeng, Barcelona, mohlopi, maathipa, kampeng,france ext 2, maditameng, khulwane, Komane, mmid-itsi, modupi, Riba Moshate, Sekoma	3941	2%	7994	7770	Shacks and brick houses
20	Bothashoek ,Dooringkop, Pologong, Dithabaneng, Riverside, Phelind-aba, Pakaneng, Sofaya, Naledi, Santeng, Mashemong, Khalanyoni, Legabeng	13000	7%	21980	20020	Shacks, Traditional ,RDP Houses
21	GaMakofane,Pidima,Sekopung, Motlolo Ga-Podile	3698	2%	6300	6000	Brick houses,
22	Taung, Makotaseng, Matokomane, motodi	3083	1.5%	6205	6127	Traditional houses and shacks
23	Kgotlopong, Mahlatsi, Mafarafara, Motlailane & Alverton	2290	1%	4596	4564	Traditional houses and shacks
24	Makgopa, Makgwareng, Legogwaneng, Mogoleng, Matshiretsane, Phadishanong, Maakgongwane, Masakeng, Ga-Molai, Ga-kgwedi, Lebalelo, Paeng, Majaditshakhudi	3600	2%	7294	7106	Shacks and RDP houses
25	B1, Mashamothane, Zone 1-8, Mareseleng, Mashamthane zone 1&2, Mashifane park	10600	5%	21350	21050	Bricks, shacks
26	Rutseng, Ga-Nkoana, Banareng, Ga-moraba A&B, Lepelle, Tswenyane & Phiring	2880	1.4%	5860	5660	Shacks and mud houses
27	Moshate, Tsakane, Kalkontein, Mabelane, Makakatela, Kutullo A&B, Shushumela & Matepe, Kutullo C&D, Dithamaga & Madibeng	2377	1%	4802	4706	Traditional houses and shacks
28	Ga-Rantho and Ga-Masha	4600	2%	9780	8620	RDP, brick and traditional houses
29	Maphopha, Ntake, Makua, Ratau, Maepa, and Maseven	3427	2%	5 204	3381	RDP, mud and traditional houses
30	Park City, Vodaville, Mountain View, Township, Airport, Showground, Mapareng, Thabakhulwane, Lekgwareng, Morulaneng	8596	4.3%	17384	17000	Bricks and shacks
31	Dresden village, Makgemeng, Kopie & Mangabane, Steelport	4825	2.4%	6671	6524	RDP, shacks and brick houses
32	Shubushubung, Rostock, seokodibeng Juven, Mahlabeng, Mooilyk, Tjibeng, Ledingwe, Phasha Makgalanoto, Phasha Selatole, GaMampa and Seokodibeng	4 151	2%	9810	2 836	Shacks
33	Mogabane-shole,Boselakgaka, Selepe Moshate, Selepe, Mashemong, Manotoana Moshate, Checkers, Mosotse-Motjatjane, Phashaskraal, Swazi-Mnyamane, Manotoana Mashemong	3 489	2%	8 894	5093	Brick houses and shacks

34	Mokgotho, Monametse, Sefateng, Mohlahlaneng, Bogalatladi, Mafeane, Mogolaneng, Mabulela, Maruping, Mogabane, Malomanye, Mphaaneng & Mashikwe	2941	1%	4 952	3 007	RDP houses, brick and traditional houses
35	Ga-Maisela India, Pelangwe, Modimolle, Malogeng, Mae-selaMahlabaphoko, Makuswaneng, Nkoana Moshate, tau mankotsane, mahlakanaselong	4290	2%	4893	4250	Shacks, mud houses and bricks
36	Moshate Tau Nchabeleng, Mapoteng, Tebeila, Mabopo, Mashung, Ga-Nchabeleng, Ga Nkwana Mashung, Apel Madithame, Mooiplaas, Masha, Strydkraal A	4697	2%	9592	9196	Bricks, RDP, Muddy, shacks
37	Strydkraal B, Matlala, thobehlale, thabanaseshu, mashabela, matamong, seleteng, moshate,magagamatala, sepakapakeng, malaeneng A&B, Mototol-waneng, matebana and radingwana	4746	2.3%	10 339	8645	Shacks and brick houses
38	Ga-Seroka,Manoge, Mashilabele, Phageng, Masehleng, Ga-Mmela, Phahlamanoge	3080	1.5%	5005	4960	Sharks, Bricks, Mud
39	Mokhulwane, Magotwaneng, Marakwaneng, Ga-Matsimela/mesopota-mia, Makgwareng /Ga-photo, Lerajane, Mmashaku, Makgaleng, Sekabeng/Tjeb-ane, Sehlabaneng, sekateng /bofala, Ditlokwe,	2754	1.3%	6264	5829	Bricks, Shacks Traditional houses

Table 1.6: Fetakgomo -Tubatse Local Municipality Villages
Source: Fetakgomo Tubatse Local Municipality IDP (2017)



1.8.1 Regional location

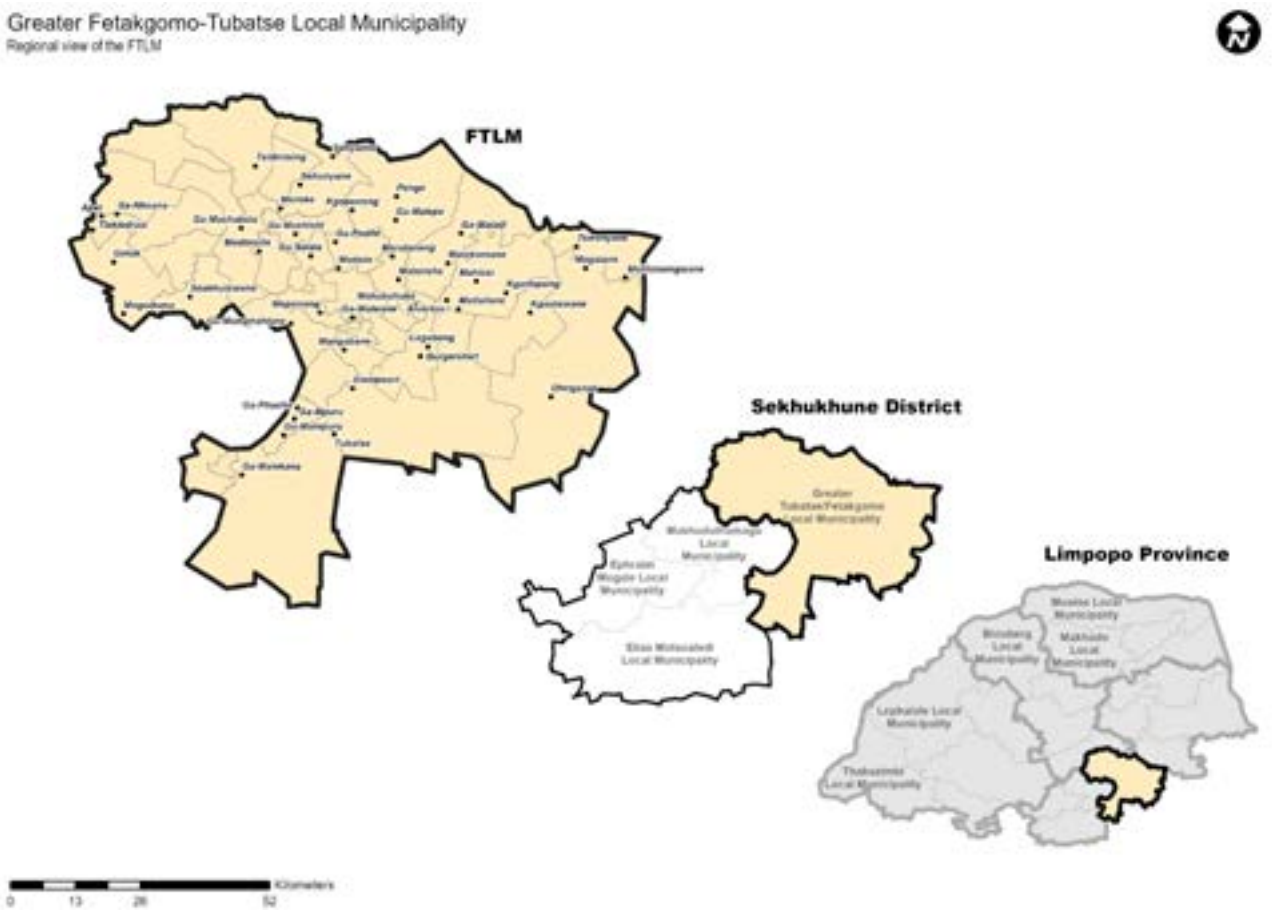
The FTLM is located in the Limpopo Province and falls within the boundaries of the Sekhukhune District Municipality (SDM). The largest urban concentrations in the district are Groblersdal, Marble Hall, Burgersfort, Jane Furse, Ohrigstad, Steelpoort and Driekop. Most of

these semi-urban areas are within the boundaries FTLM namely: Burgersfort, Ohrigstad, Steelpoort, Driekop and Apel. Major town, Burgersfort is located on the regional road R555 and R37 as shown in Map 1.2 above and 1.3 below

1.8.1.1 Land Use distribution

The land use distribution characteristics indicate that the majority land portions are in the natural state within the FTLM. Urban development is concentrated around Burgersfort moving towards Steelpoort (R555) and the road R37 stretching the direction of Polokwane with mining land and associated residential areas. There are mountains ranges -

they stretch on both road R555 and R37. The mines are operated on these mountains ranges. The mining activity is increasing – this resulting in high demand for residential land and housing, retail developments and other support services. The increased



mining activity and related support services as well as new residential developments clearly generate additional trips on the road network, putting further pressure on the road network which is already

operating beyond capacity in Moloto and Dilokong corridors. This is mainly, due to transporting of mining ore and other products by road to certain areas such as plants for refinery.

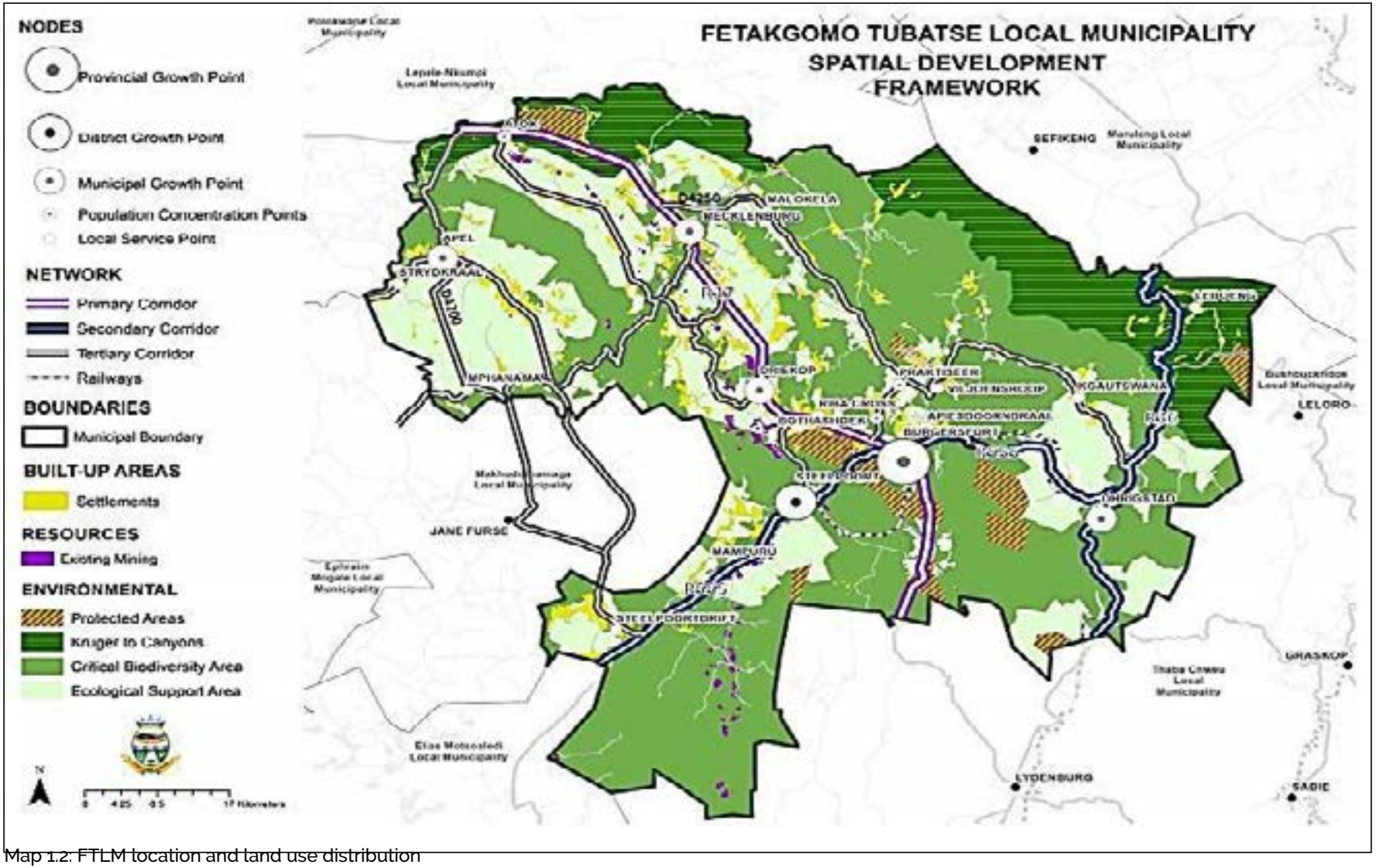
The road R555 connects the municipality to Mpumalanga province and traverses to N4 which further connects with Mpumalanga province and Gauteng province. The R37 connects the municipality with Phalaborwa and significantly Polokwane and the N1.

Furthermore, tourism destinations land use and facilities located within the municipal area are places of interest/points attraction that generate

the need for transport. The following primary tourism areas and facilities are located within the FTLM:

- Caves (ward 1,3 an12)
- Magnetic stones (ward 3 and 6)
- Mountain (ward 5)
- Foot print, carve and Mohlapo (ward 6)
- River, sand and rocks (ward 9)
- Potlake game reserve

- Sehlakwe water falls
- Phahlananoge wind stones



Map 1.2: FTLM location and land use distribution
Source: TFLM SDF (2020)

1.8.1.1 Land Use distribution

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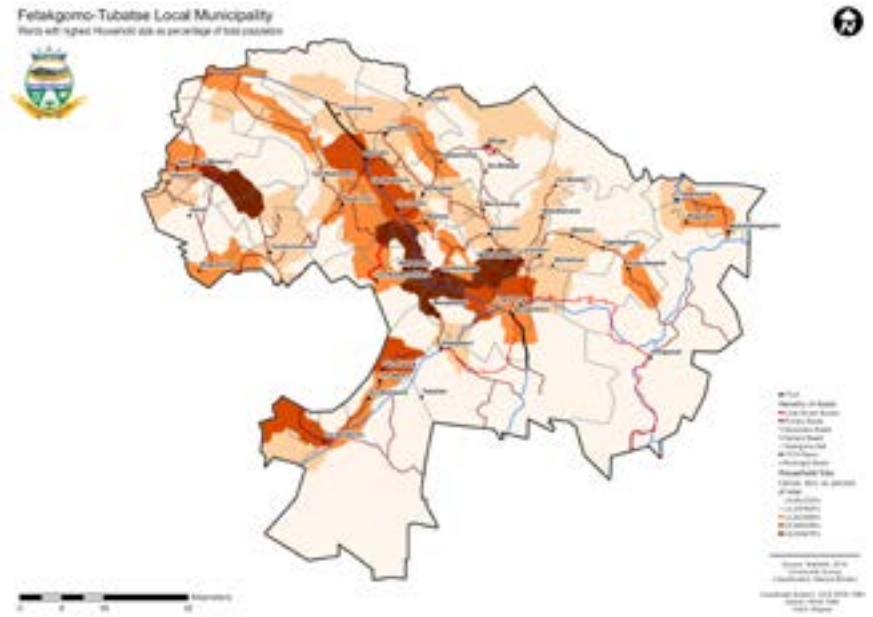
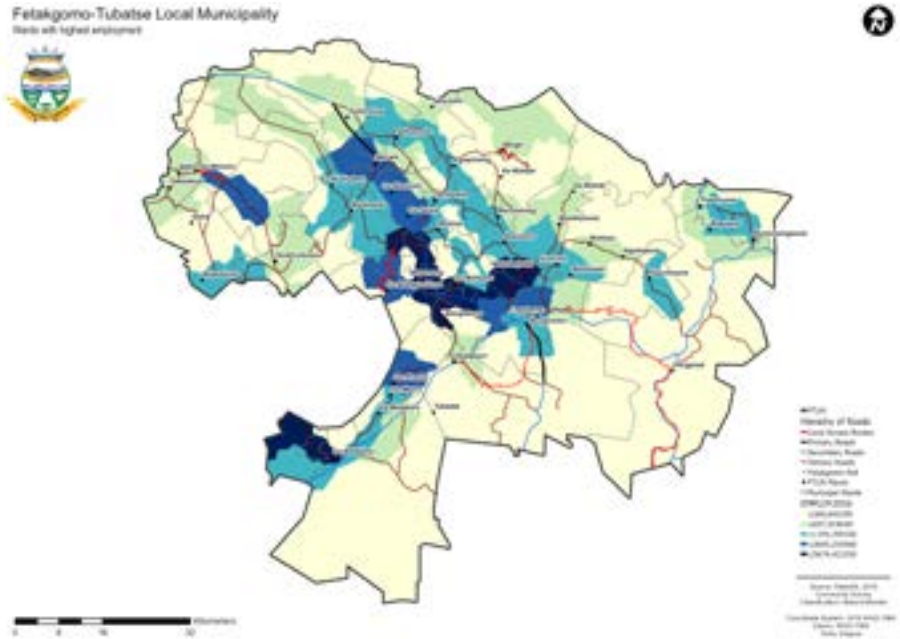




TOURISM

1 The Shoe

2 The Alpha Omega

3 Echo Caves

4 J.G. Strijdom Tunnel

6 Tsaee – Valley of the Pedi Kings

7 Handmade art & Crafts

8 Abseiling

MBT

4X4

5 Pontjake Nature Reserve

Hiking

Rivers

1.8.1.2 Structuring Elements

The FTLM settlement pattern is influenced by four major elements. These elements are:

- The existing built-up environment;
- The natural environment ;
- The main road network; and
- The chrome mines.

(a) The Existing Built-up Environment

FTLM is the highest densely populated municipality in the SDM with Burgersfort being the centre of population concentration in the FTLM. Burgersfort is where the largest concentration of employment opportunities and economic activity exist. Most of the settlements within the FTLM boundary are dependent on Burgersfort and its concentration of economic activity. The largest settlements in the FTLM area developed along the Moloto corridor and Dikolong corridor. In order to analyze settlements patterns and corridors spatial development trends Limpopo Economic Growth and Development Plan and Fetakgomo- Tubatse Local Municipality IDP 2018 summarized and identified settlement hierarchy as follows:

- First order settlements (Growth Points);
  First order settlements Provincial Growth Points (PGPs) - Burgersfort District Growth Points (DGPs) - Steelpoort Municipal Growth Points (MGPs) - **Ohrigstad - Driekop - Mecklenburg - Apel**

- Second order settlements (Population concentration points); Second order settlements Population Concentration Points (PCPs) - **Riba Cross - Bothashoek - Mashamothane - Praktiseer - Atok**
- Third order settlements (Local service points);
  Third order settlements Local Service Points (LSPs) - **Kgautswana - Maakgongwane - Masakeng - Mophalema - Mampuru and extension - Malokela A and B - Leboeng - Mphanama**

- Fourth order settlements (Village Service area)

Fourth order settlements Village Service Points (VSPs)

- Steelpoortdrift Expansion of Burgersfort town
- Apiesdoorndraai Expansion of Burgersfort town
- Dresden Expansion of Burgersfort town
- Viljoenshoop Expansion of Burgersfort town
- Olifantspoortjie Expansion of Steelpoort town
- Goudmyn 337 KT Expansion of Steelpoort town
- Strydskraal Nodal Point Agriculture potentia

(b) The Main Road Network

Roads are determining factors in the location of development as they provide access, ensure connectivity and provide ease of movement through an area. The main roads that link Burgersfort with the greater region and influence the growth direction of settlements in the area are the R37, R555, R36, D4190, D4200, D4252 and D40454 (see Map

1.2). These roads were categorized according to their functions and capacities as set out in Table 1.7 below

Order	Corridor	Description (Functions And Capacities)
Primary	R37 (Dilokong Corridor)	The Primary Corridor (R37) that runs through the municipal area in a North-South direction, connects Burgersfort with Polokwane and Lydenburg
Secondary	R555 Regional Route; R36 Provincial Route	The Secondary Corridors traversing the municipal area is the R555 Regional Route (connecting Steelpoort before crossing the R37 and ends at an intersection with the R36 Route at Ohrigstad.) and the R36 Provincial route (traversing the municipality in a North-South direction to the east of the municipal jurisdiction connecting Ohrigstad).
Tertiary	Ngwabe Corridor D4190 D4200 D4252 D40454	The Tertiary Corridors consist of the following routes which form part of the central nerve system of the municipality: Ngwaabe Corridor to Jane Furse Pelangwe to Mabulela (D4190) Mphanama to Jane Furse to Apel (D4200) Mphanama to Mashabela (D4252) Road D40454 to Mphanama to Petseng to Ntswaneng to Ga-Kgwete

(c) The Natural Environment

The topography plays a big role in the settlement pattern, but more specifically in the future growth potential of the FTLM settlements as the northern part of the FTLM is mountainous, thereby presenting engineering challenges as far as the new settlements development and provision of infrastructure is concerned. The proximity of mining and agricultural land are also influencing the settlement patterns.

(d) Mining Activities

Fetakgomo -Tubatse Local Municipality is the distressed mining town's municipality. This is attributable to lots of mining activities taking place within the FTLM creating a definite potential for expansion of the cities on the basis of its economic base.

1.8.2 FTLM demographic profile

The demographics, social and economic dynamic of Fetakgomo- Tubatse Local Municipality in relation to Sekhukhune District Municipality and Limpopo province are investigated. More specifically,

distinctions are made between the following types of information: population and profile of population in terms of income, age and education and migration and economic characteristics.

1.8.2.1 Population characteristics

According to IHS (2018) the municipality has a total population of about 497 653 that is made up of about 116 050 households. Comparatively, the population of FTLM is close to the half of the SDM making FTLM the highest population in the district municipality.

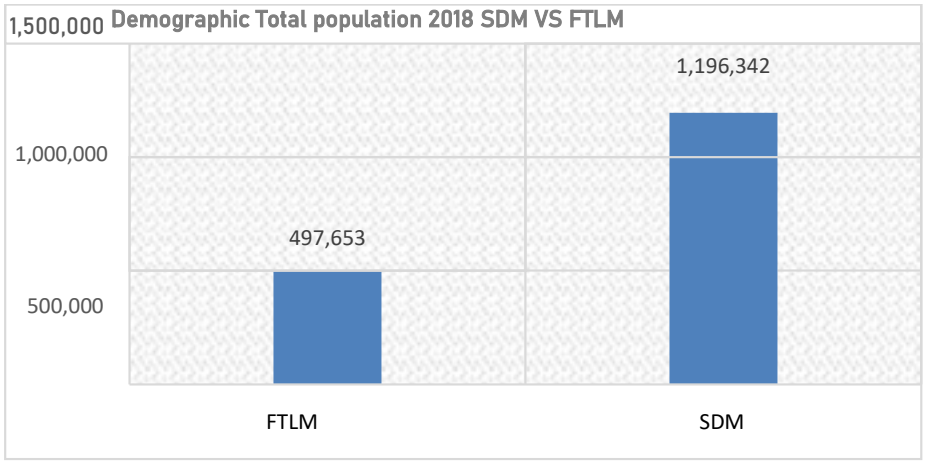
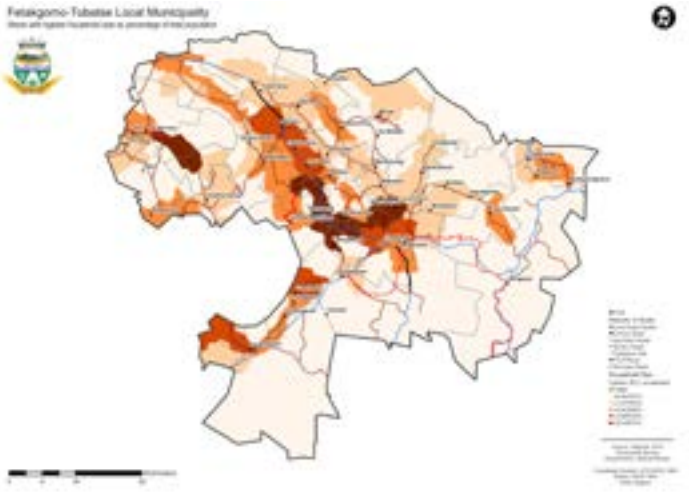


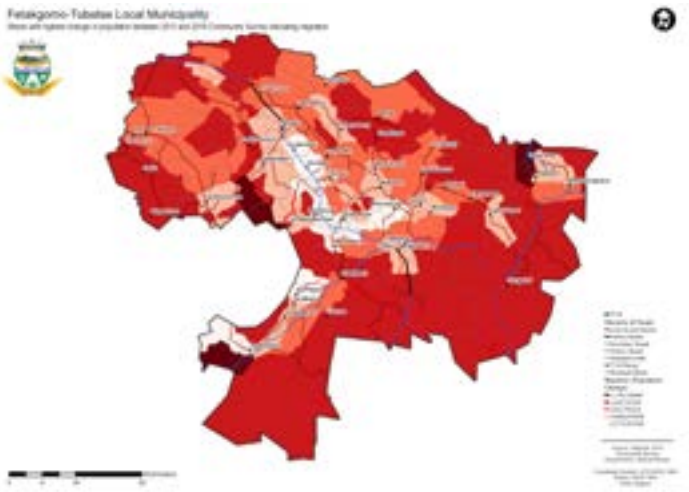
Figure 1.2: Total Population of SDM and FTLM.
Source: IHS Markit Regional eXplorer version 1749

1.8.2.1.1 Population growth and structure (age and gender)

Municipalities' residential settlements especially their urban areas expand for a variety of reasons though major contributing factor is natural population growth. It is worth noting from public transport perspective that the population structure shows that there are more females than males in FTLM – generally, in various reviews and reflections offered – South African males mode of transport is broad as their use of

bicycles and motorcycles is significantly high compared to females counterparts thus increasing a demand for public transport.





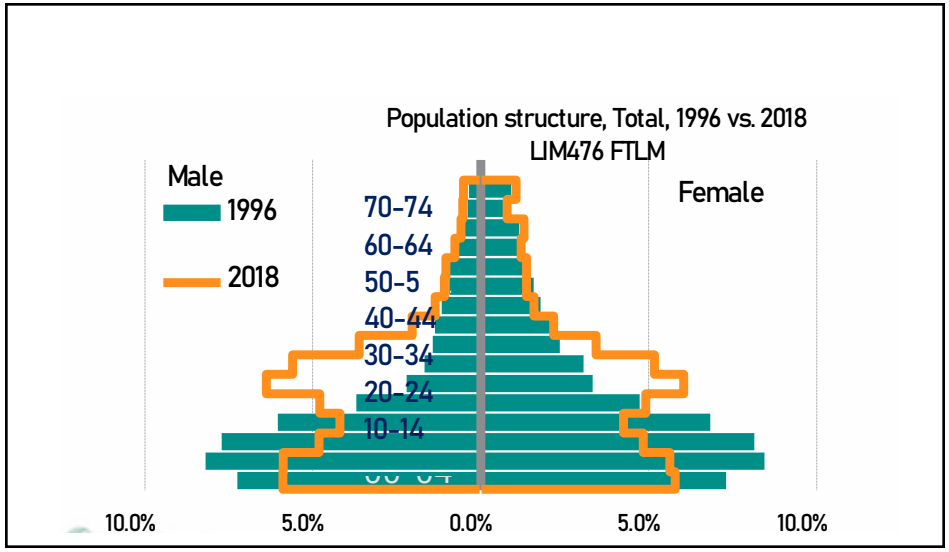


Figure 1.3: FTLM population structure
Source: IHS Markit Regional eXplorer version 1749

Population growth and migration

1.8.2.1.1 Population growth and structure (age and gender)

Municipalities' residential settlements especially their urban areas expand for a variety of reasons though major contributing factor is natural population growth. It is worth noting from public transport perspective that the population structure shows that there are more females than males in FTLM – generally, in various reviews and reflections offered – South African males mode of transport is broad as their use of bicycles and motorcycles is significantly high compared to females counterparts thus increasing a demand for public transport.. A look at Figure 1.4 below shows that the average population growth per annum from 1996 to 2018 is estimated at 1.6%.

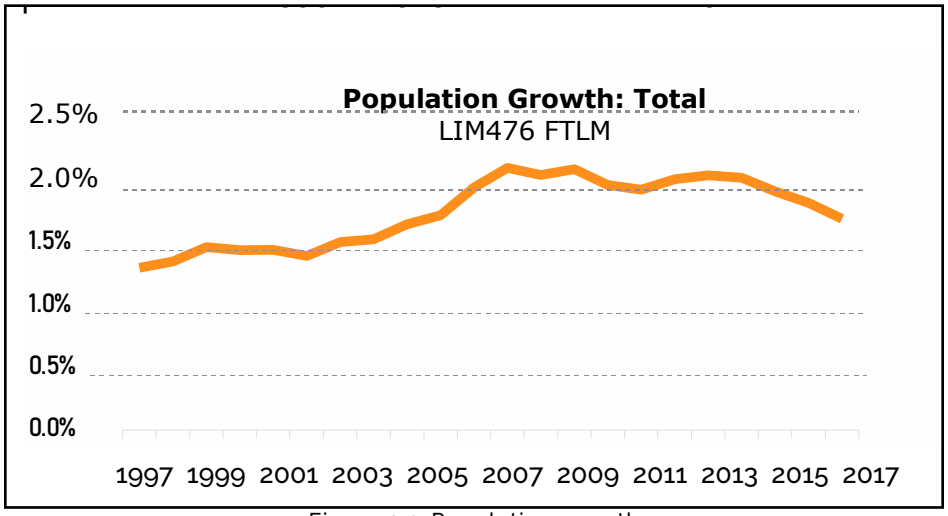


Figure 1.4: Population growth
Source: IHS Markit Regional eXplorer version 1749

The highest population growth was projected at 2.2% in 2007 this can be attributed to intensification of mining activities that yield economic opportunities resulting in high in-migration. The migration still plays a significant role as rural to urban movement of people is inevitable on the basis of labour pools, food security and sociocultural life attributes that attract people to cities especially by the young and poor, increases pressure on services and transport, complicated by apartheid-fragmented geography. In essence, disparities exist between urban and rural areas in terms of access to basic services and quality of life resources. Given the impetus towards migration – the movement of people, goods, capital, ideas and information burdens urban areas in turn opening up space within them and at the urban fringe to development. Based on this land readjustment, the line between an expanding city and its border (peri-urban) area, which often include former rural areas, has become blurred.

Level of education, labour glimpse and human development

There have been impressive levels of higher education attainment and human development in FTLM as set out by Figure 1.5 below.

Generally, increasing education levels translates to high income per capita. The basis of education is the allocation of labour – human and physical capital services to the cities with the highest wages and human development as illustrated in Figure 1.6 below.

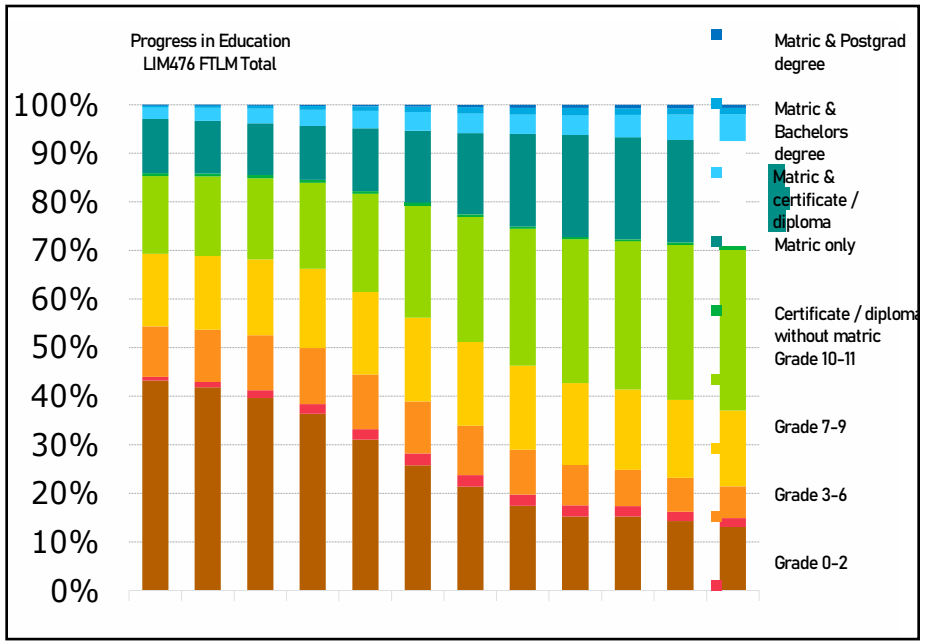


Figure 1.5: Progress in education
Source: IHS Markit Regional eXplorer version 1749

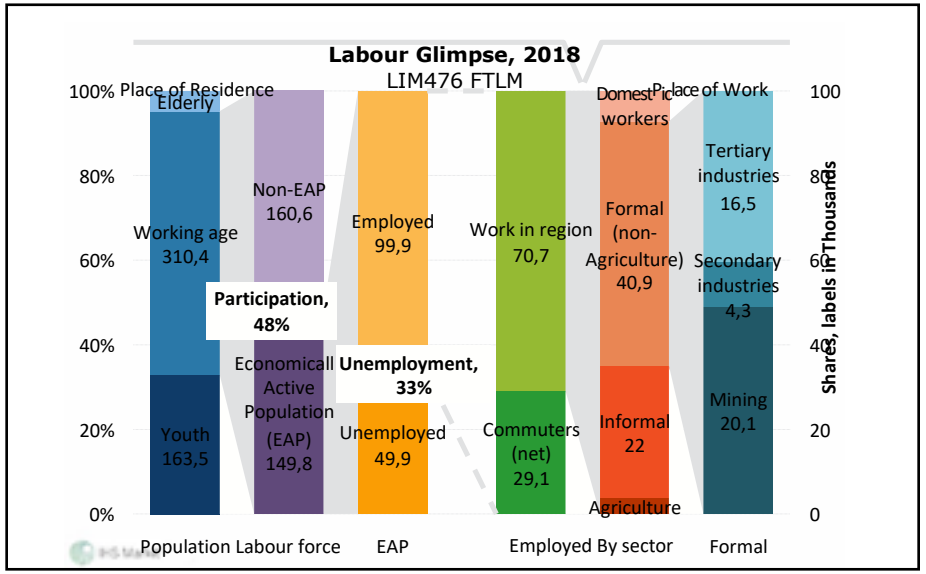


Figure 1.5: Progress in education
Source: IHS Markit Regional eXplorer version 1749

Economic growth has been slower than the demand for employment in FTLM. This was reflective in the household income which provides a significant guidance and analysis income distribution/spending. The income and expenditure in these context would be used to outline and interpret FTLM public transport ridership and use of other modes of transport. With majority of FTLM population residing on the outskirts of urban areas (villages) this means that households from the lowest income quintile spent higher proportion of their income on public transport. The apparent implication of low household income unaffordability of public transport for households.

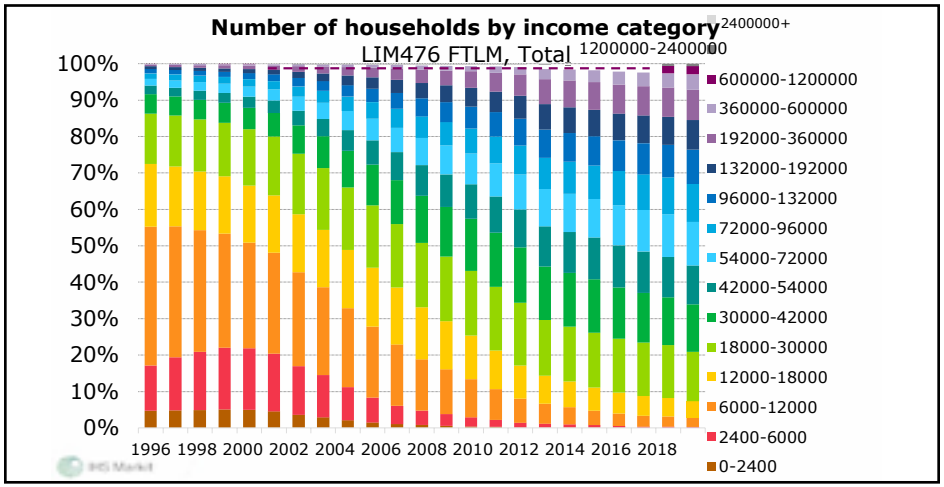


Figure 1.8: Number of Households per income category

The economic hardships of lower quintile of the household income in the FTLM population is also reflected in the human development index relative to the socio-economic development such as extreme poverty.

According to World Bank on the basis of Gini index that measures income inequality – South Africa is the most economically unequal society in the world and this is reflected in the FTLM as well. The parallel issues, high mortality translating to low Human Development Index better, lower standard of living, etc. Based on the empirical literature, tangible and practical expressions such as public education, health, housing and transport amongst others shed light on and bear empirical evidence to how FTLM was deprived of quality infrastructure and basic services – in villages surrounding its town due to apartheid as it majority inhabitants are blacks.
The demographic parameters discussed in the preceding sections conceptualise spatial development dimension of urban and rural areas – the spatial redistribution of populations from rural to urban settlements, travel demand forecasting – status quo and future public transport and infrastructure demand.

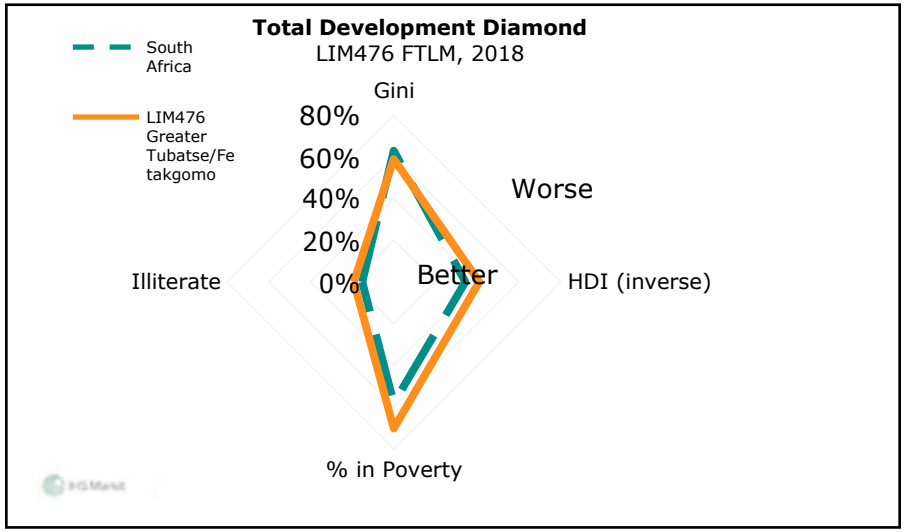


Figure 1.9: Total Development Diamond
Source: IHS MArket Regional eXplorer version 1749

1.9 Chapters layout

1. Chapter 1- Deals with the introduction to Integrated Transport Planning
2. Chapter 2-Vision, Mission and Strategic Objectives
3. Chapter 3- Status quo of the transport system in FTLM -Transport Register
4. Chapter 4- Spatial development framework
5. Chapter 5-- Identification and assessment of transport needs
6. Chapter 6 – Public transport operation strategy
7. Chapter 7- Transport infrastructure strategy
8. Chapter 8- Transport demand management strategy
9. Chapter 9 – Freight transport strategy
10. Chapter 10 – Other transport strategies
11. Chapter 11 – Funding strategy and implementation programme and budget
12. Chapter 12 – stakeholder consultation

Chapter two

2 TRANSPORT VISION AND OBJECTIVES

2.1 Introduction

There has been a significant change in transport policy since the White Paper on National Transport Policy, 1996. The evolution of land transport planning instruments and strategy formulation intensified in reaction to new democratic approaches to transportation planning (Schoeman, 2015), new challenges in the land transport practice and policy and rapid urbanisation. The drastic transportation transformation again might befit Heyns' (2015) assertion that the traditional land use and urban transport planning processes have given rise to unsustainable transport planning systems. As a result the following transportation planning and development instrument came into existence: the Rural Transport Strategy for South Africa (2003) and later (2006 and 2007); National Land Transport Strategic Framework (2006) and draft (2014); National Development Plan (2012); Department of Transport Strategy (2012 – 2014) and the National Transport Master Plan 2050 (NATMAP 2050) and other approved national policies.

In view of the above, the development of the transport vision, goals and strategies for the Fetakgomo- Tubatse Local Municipality takes into account current transport policies and legislation.

2.2 Land transport

In order to achieve integrated transport planning the pieces of legislation and policies are considered relevant and to land transport framework as set out in Table 2.1 below.

Legislation	Policies
*Advertising on Roads and Ribbon Development Act (21 of 1940) *Fencing Act (31 of 1963) *National Land Transport *Transition Act (Act 22 of 2000)* *Urban Transport Act (Act 78 of 1977) *National Transport Interim Arrangements Act (Act 45 of 1998) *Transport Appeal Tribunal Act (At 39 of 1998) *Cross Border road Transport Act (Act 4 of 1998) *Road Traffic Act (Act 29 of 1989) *National Road Traffic Act (Act 93 of 1996) *The South African National Roads Agency Limited and National Roads Act (7 of 1998) *National Land Transport Act, 2009 (Act 5 of 2009) and Regulations (R.1208, 2009) *R. 877 National Land Transport Act (5/2009): *National Land Transport Regulations on Contracting for Public Transport Services.	*White Paper on National Transport Policy (1996) *Moving South Africa (1996) *Rural Transport Strategy for South Africa (2003) *Draft minimum requirements for the preparation of integrated transport plans (ITP) (2007) *NDOT: Public Transport Strategy (2007) *NDOT: Public Transport Action Plan (2007-2010) *National Land Transport Strategic Framework (2006-2011) (2002) (Draft) *NDOT: Road Infrastructure Strategic Framework for South Africa (2006) *NDOT: Rural Transport Strategy for South Africa (2007) *NDOT: Implementation Strategy to Guide the Provision of Accessible Transport in South Africa. (2009) *NDOT: Final Draft National Scholar Transport Policy (2009) *NDOT: Transport Action Plan (2010) *NDOT: National Transport Master Plan 2050 (NATMAP) (2010) *NDOT: Road Freight Strategy for South Africa (2011) *NDOT: Non-Motorized Transport (NMT) Policy (2012) *NDOT: Department of Transport Strategic Plan (2012-2014) *TRANSNET: Long Term Planning Framework (2012) *PRASA: PRASA National Strategic Plan (2012) *NDOT: Draft National Land Transport Strategic *Framework (NLSF) 2014)

2.2.1 High level strategic and functional area policy documents

FTLM draws on NLTSF findings of the qualitative literature review/assessment and research of policy documents, strategies and plans relevant to transport to inform its ITP. This is imperative in obtaining and reviewing elements most useful in understanding the current land transport context. Thus, this ITP is being formulated in line with any changes in the transport policy, strategy and planning environment.

The NLTSF (2014) is the Phase 2 of the NLTSF (2006) Phase 1 which embodied the overarching national five year (2006 to 2011) land transport strategy, which gives guidance on transport planning and land transport delivery by national government, provinces and municipalities for this five year period. The NLTSF (2014) revises, reviews and rationalizes the functional areas framework or/ strategic themes of the NLTSF (2006). The NLTSF (2014) contextual framework, processes and detailed activities undertaken that inform the strategic approach are:

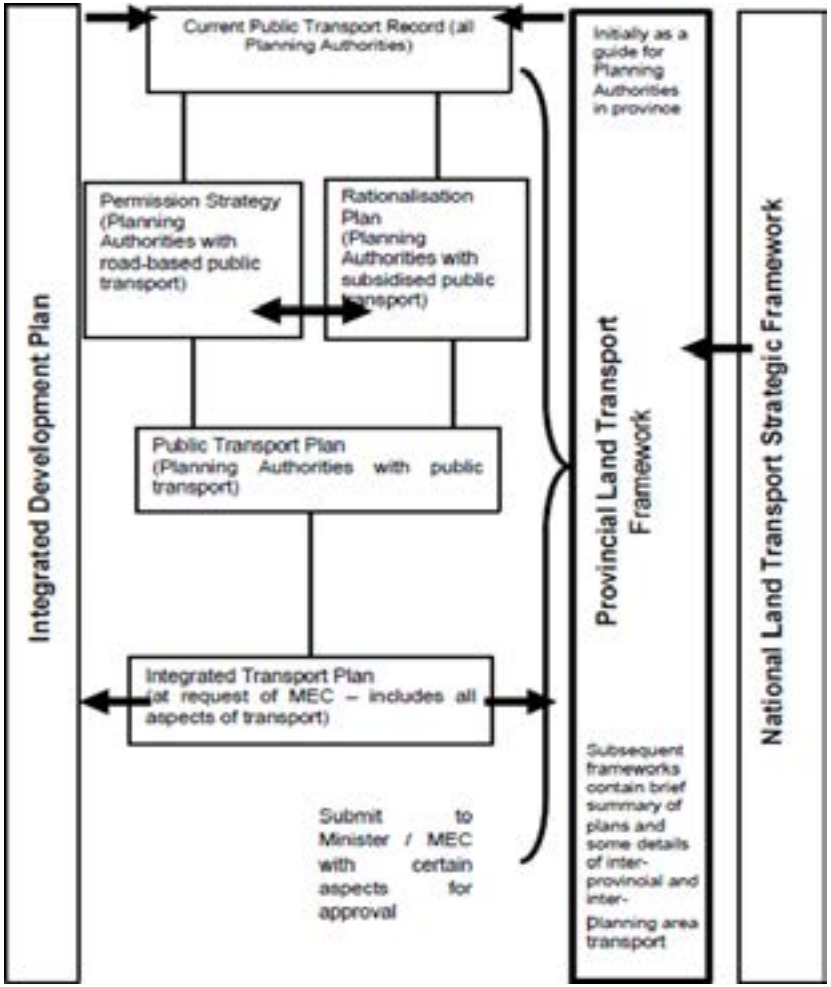
- A qualitative literature review/assessment and research of policy documents, strategies and plans relevant to transport;
- An assessment of the national strategic policy documents and functional areas policy documents with a view to:
  Define the vision and objectives of transport,
  Understand role of transport in achieving these wider objectives,
  Determine key broad national strategic issues facing the transport sector,
  Determine blockages to progress and roll out of national transport strategies,
  Determine key challenges facing transport nationally,
  Determine headline transport initiatives/projects being considered over next five years (e.g. investments, studies, plans, implementation (PRASA Rolling Stock programme, IRPTN, Transnet)) and others.
  Define drivers of change in transport,
  Assess each statutory requirement of the NLTSF in line with any changes in the transport policy, strategy and planning environment as well as any gaps in the current framework,
- Assess the current national transport vision/objectives of NLTSF;
- Synthesize and document literature gathered;
- Review NLTSF (2006) document in terms of:
  Relevance of context given changing national policies and legislation;
  Consideration of whether the contents of the framework are still relevant and valid,
  Recommendation of the NLTSF report format and contextual amendments, and
  Review of the functional areas with a view to rationalizing them to ten strategic planning areas.

The contextual framework reviewed and within which this NLTSF has been prepared is transport-related legislation and its associated policy as set out in Table 2.3 below

High level strategic documents	Functional area policy documents
• Department of Transport Strategy (2012 – 2014) • National Development Plan (2012) • National Transport Master Plan 2050 (2011)	• National Freight Logistics Strategy • Road Freight Strategy • PRASA National Strategic Plan (2012) • Transnet Long Term Planning Framework (2012) • Non-Motorized Transport (NMT) Policy (2012)
• Moving South Africa (1998) • Gauteng Integrated Transport Plan (2013) • White Paper on National Transport Policy (1996)	• Spatial Planning and Land Use Management Act (2013) • Transport Action Plan (2010) • Public Transport Strategy (2007) • Public Transport Action Plan (2007 – 2010) / Public Transport Strategy and Action Plan (PTSAP) • Action Plan to guide the provision of accessible public transport systems in South Africa, draft for discussion (2009) • Implementation Strategy to guide the provision of accessible public transport in South Africa (2009) • National Spatial Development Perspective (2006) • A guide to the national planning framework (2009) • Rural Transport Strategy of South Africa (RTSSA) (2007) • Final Draft National Scholar Transport Policy (2009) • Road Infrastructure Strategic Framework for South Africa (2006) • Green paper: National Strategic planning (2009)

2.3 Land transport vision

The following are vision and mission statements obtained from various policy documents and legislation relevant to transport. These visions are presented as per the hierarchy of transportation plans as set out in Figure 2.1 below.



2.3.1 National Transport Framework

2.3.1.1 The Vision

"Transport, the heartbeat of South Africa's economic growth and social development"

2.3.1.2 The Mission

Lead the development of integrated efficient transport systems by creating a framework of sustainable policies, regulations and implementable models to support government strategies for economic, social and international development.

2.3.1.3 The Values

The core values of the department are:

- Maintain fairness and equity in all our operations;
- Strive for quality and affordable transport for all;
- Stimulate innovation in the transport sector;
- Ensure transparency, accountability, accessibility; and
- Upholding of the Batho Pele principles.

2.3.1.4 The Strategic Objectives

The objectives that the department aims to achieve in providing a policy framework, regulation and implementation models are:

- Competitive transport costs;
- Safety and security improvements;
- Reduce infrastructure backlogs;
- Improve access; and
- Reduce time in transit.

2.3.1.5 Policies (plans) visions

The visions for these policy documents and other approved national policies are as set in Table 2.4 below.

Policy or plan	Vision
White Paper on National Transport Policy (1996)	Provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at improving levels of services and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable.
Moving South Africa (1998)	To develop a strategy to ensure that the transport system of South Africa meets the needs of South Africa in the 21st century and therefore contributes to the country's growth and economic development – Visions 2020). The three key thrust ground of the vision are: high volume corridors, sustainable operations and improved efficiency.
Rural Transport Strategy for South Africa (2003-2007)	The government should provide rural transport infrastructure so that it can be a catalyst for sustainable economic development to improving social access and poverty alleviation.
NATMAP (2006)	To develop a dynamic, long-term, sustainable land use/multimodal transportation systems framework for the development of networks infrastructure facilities, interchange termini facilities and service delivery that shall be demand responsive to national/ provincial/district and/or any socio-economic growth strategy, and/or any sectoral integrated spatial development plan.
Road Infrastructure Strategic Framework (2006)	Provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at improving levels of services and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable.
Public Transport Strategy (2007)	To ensure sustainable, equitable and uncongested mobility in liveable cities and districts is achieved through Integrated Public Transport Networks (IRPTNS).
National Land Transport Strategic Framework (2006-2014)	To provide policy statements on twenty one different aspects of land transport which are: Transport Planning; Taxi Mode; Bus Mode; Rail Mode; Institutional Structures; Land Use Restructuring; Roads; Cross-Border Roads Transport; Freight Transport; Interprovincial Land Transport; Rural Transport; Safety; Transport for Persons with Disabilities; Non-Motorised Transport; Transport and Environment; Transport and Tourism; Inter-modalism and Integration of Transport Planning; Conflict-Resolution Mechanisms; Key performance and Funding.
Public Transport Action Plan (2009)	Ensure that passengers transport services address user needs. Including those of commuters, pensioners, the aged, scholars, the disabled, tourists and long distance passengers.
National Scholar Transport Policy (2009)	To ensure the provision of a transport service that caters for the needs of scholars.
PRASA National Strategic Plan (2012)	Implementing a bold plan to transport and modernize passenger railways.
NDOT Strategic Plan (2013/2014)	Ensure that transport is the Heartbeat of Economic Growth and Social Development.

Table 2.4: Land transport policies (plans) and their visions

2.3.2 Provincial Land Transport Framework

2.3.2.1 The Vision

"Quality transport infrastructure and services for all"

2.3.2.2 Transport Mission Statement for the Limpopo Province

To develop, co-ordinate, implement, manage and maintain an integrated and sustainable multi-modal transport system and appropriate infrastructure by:

- Effectively and optimally utilising and developing available resources;
- Encouraging and providing a safe transport environment for all users;
- Planning and facilitating transport infrastructure provisioning and operations; and
- Being transparent, accountable, and responsible.

The Limpopo Department of Transport (LDoT) strives to address the problems

identified by the Moving South Africa Strategy Document (1999) which states:
"The South African transport system is inadequate to meet the basic accessibility needs (to work, health care, schools, shops), and many developing rural and urban areas. In order to meet basic accessibility needs, the transport services offered must be affordable to the user. The transport system will aim at minimising the constraints to the mobility of passengers and goods, maximising speed and service, while allowing customers choice of transport mode or combination of transport modes where it is economically and financially viable to offer a choice of modes. This demands a flexible transport system and transport planning process that can respond to customer requirements, while providing on-line information to the user to allow choices to be made. It also requires infrastructure to be tailored to the needs of the transport operators and end customers".

2.3.2.3 Provincial Transport Objectives

The Limpopo Department of Transport has adopted a macro- economic perspective in determining its transport objectives and the following worth noting:

- Macro Sector Planning examines land use and transport planning in all spheres of government from a multimodal perspective, and manages and facilitates the implementation of the planning provisions contained in the National Land Transport Act (2009).
- Freight Logistics develops and coordinates the implementation of freight logistics strategies aimed at unblocking bottlenecks in the freight logistics system and related supply chains, with particular emphasis on integrating elements of the system across all modes.
- Modelling and Economic Analysis undertakes economic studies, provides innovative and enabling transport infrastructure funding options that respond to the socioeconomic needs of the national agenda, and applies economic analysis tools to transport sector policy development.
- Regional Integration manages, coordinates and facilitates the development of strategies for engagements in the Southern African Development Community region and the rest of Africa.
- Research and Innovation ensures research, innovation and monitoring of the transport sector for sustainability.
- Integrated Transport Planning Administration Support provides administrative support services to the programme.

2.3.2.4 Provincial Transport Strategies

The Limpopo Provincial Transport Strategies are as follows:

- Ensure that rail efficiencies and seamless integrated movement of cargo are increased by developing appropriate corridor mapping tools;
- Develop appropriate institutional and regulatory frameworks that will enhance and promote the participation of the SMMEs and BEE in transportation projects; '
- Encourage private sector participation and investment by developing policies to address transport planning and freight logistics;
- Support an effective and efficient transport system by developing a transport performance indicator database.
- Improve the impact of transport projects by coordinating and managing the total lifecycle of projects and maintaining effective monitoring, evaluation and reporting systems on an on-going basis.

2.3.2.5 Provincial Rail Transport Objectives

- To direct effective and sustainable rail transport and freight rail movement based on competition and private sector participation;
- To work on close collaboration with stakeholders resulting in an increase in cargo moved by branch lines; and
- To increase the mobility and accessibility of rail transport by establishing inter-modal facilities and enable the local government sphere to execute integrated transport planning.

2.3.2.6 Provincial Road Transport Objectives

- To facilitate the rehabilitation of roads by supporting the upgrading of coal haulage roads;
- To improve the condition of provincial roads by reducing those in poor condition through a targeted maintenance program across Provinces;
- To contribute to halving unemployment by promoting industry development and labour intensive methodologies to create fulltime equivalent jobs in the roads sector;
- To support the implementation of the road infrastructure strategic framework by ensuring the use of updated road asset management systems in the Limpopo Province; and
- To improve rural access to road transport by assisting municipalities in developing non-motorised infrastructure.

2.3.2.7 Roads Agency Limpopo Strategic Objectives

- Ensuring the continuous maintenance of the road network through routine maintenance;
- Resurfacing;
- Strengthening and improvement contracts;
- Use of a comprehensive asset management system through which all project budget allocations occur;
- Ensuring that the optimum maintenance strategy is selected for each road section;

- Ensuring that the road network is maintained at an adequate level of service for the funding available; and
- Institute prudent spending policies for administrative and overhead costs.

2.3.2.8 Public Transport Objectives and Strategies

- To improve public transport accessibility and reliability by developing inter-modal facilities at strategic positions to facilitate seamless and Integrated public transport systems;
- To ensure efficient and effective public and tourism transport by establishing the Provincial Regulatory Entity as required by the National Land Transport Act of 2009;
- To increase the equity ownership and broad based black empowerment in the public transport sector by implementing the industry development model to empower 20 percent of taxi operators;
- To align and integrate the taxi recapitalisation programme with national and provincial rail services and provincial bus services; and
- To ensure integrated and optimised public transport services by facilitating the development of integrated rapid public transport networks.

2.3.2.9 Limpopo Integrated Rural Development Framework

One of the mechanisms to achieve sustainable modal integration is to ensure that the provision of public transport is business driven and based on sound business principles. Rural areas are defined as the sparsely populated areas in which people farm or depend on natural resources, including the villages and small towns that are dispersed through these areas. They include the large settlements in the former homelands created by Apartheid removals, which depend for their survival on migratory labour system and remittances. They are characterised by high level of poverty and economic underdevelopment. These areas should serve as the immediate focus of rural development.

The Poverty Report (1998) reveals that in the Limpopo Province, almost 18-percent of the people live in rural areas and live below the poverty line. Access to quality employment is a paramount aspect towards sustainable livelihoods and thereby reducing poverty and inequality. The lack of access to physical infrastructure such as electricity, clean water, proper roads and housing are closely linked to poverty.

2.3.2.10 Provincial Strategies Based on Policy

- Provide effective financial and economic support to public transport;
- Promote the most cost-effective mode of transport;
- To introduce subsidy mechanisms that will encourage the business sector to create employment opportunities closer to residential areas;
- Implement measures to promote shorter travelling distances;
- Implement incentives to operators for affordable tariffs;
- Focus on prioritised economic activity nodes and transport nodes in the transport plans;
- Identify minimum service levels of the public transport services serving economic activity nodes;
- Identify and award sustainable bus contracts;
- Use financial and economic support measures to promote sustainability in the bus industry;
- Develop a holistic and Integrated funding strategy focusing on maximising the transport budget from the Provincial allocation, and by achieving efficiency gains through better utilisation of available funds; and
- Explore the possibility of additional funding sources.

2.3.2.11 Capacity and Skills Development

- Training of officials in Integrated Transport Planning and Land Use Planning;
- Recruitment of Transport Planners and Engineers; and
- Procurement of consulting engineering services for consistent and continuous advice and random projects.

2.3.2.12 Address Service Backlog

- Motivate subsidised public transport coverage in the FTLM with the objective of reducing the cost of travel;
- Install public transport infrastructure such as shelters in inter- modal facilities; and
- Upgrade road infrastructure and streets between residential and business nodes.

2.3.2.13 Road Safety

- Develop a Central Communications Centre for Incident Management;
- Road Safety audits;
- Addressing hazardous locations;
- Motivate law enforcement at strategic locations; and
- Education and communication campaigns.

2.3.3 Sekhukhune District Municipality Framework

2.3.3.1 The Vision

The Vision for the Sekhukhune District Municipality is:

The development – oriented leader in service delivery

2.3.3.2 Sekhukhune District Transport Objectives

- To find alternative funding sources for economically non-viable routes;
- To provide safe learner transport;
- To provide public transport on pension pay-out days;
- To provide transport that is suitable for the physically challenged;
- To have emergency transport on call;
- To maintain all district roads to acceptable pavement conditions;
- To improve the district road network to address accident hot spots, to improve traffic flow and to give preference to public transport where appropriate;
- To maintain public transport facilities to high levels of cleanliness and to maintain the condition of infrastructure at acceptable engineering and architectural standards;
- To construct new, or to upgrade existing public transport facilities in relation to the need and demand for additional capacity;
- To upgrade the status of pedestrians in certain areas of a town through the provision of safe crossings and sidewalks;
- To encourage non-motorised transport projects such as the Bicycle Empowerment Network;
- To appoint a transport planner for the SDM, who should ensure that statutory transport planning requirements are fulfilled and who can manage transport funding;
- Job creation through the development of the transport system;
- To make the transport system easily accessible for tourists and visitors to the district; and
- To promote BEE and SMME development in the planning, maintenance and upgrading of the transport system.

2.3.3.3 Sekhukhune District Transport Strategies

- Regulate and control the public transport system;
- Provide public transport options for rural communities;
- Upgrade and maintain transport infrastructure (roads and public transport facilities);
- Promote non-motorised transport;
- Improve and integrate transport planning;
- Develop transport as an economic growth tool;
- Safety; speed, time;
- Operate an Integrated transport system;
- Public transport system subsidized and also making use of commercial contracts; and
- Law enforcement in relation with operating licences.

2.3.4 Fetakgomo- Tubatse Local Municipality

2.3.4.1 Vision

"A developed Platinum City for a sustainable human settlement"

2.3.4.2 Mission

The mission of the FTLM is to promote:

- Accountable through active community participation;
- Economic advancement to fight poverty, inequality and unemployment;
- Render accessible, sustainable and affordable service;
- Municipal transformation and institutional development; and
- Sustainable livelihoods through environmental management

2.3.4.3 Transport objectives

The following Transport Objectives are adopted to form a broad FTLM transport objectives:

- To develop, co-ordinate, implement, and manage an integrated, multi-modal transport system;
- To act as a catalyst for social upliftment and economic growth;
- To ensure that the system is balanced, equitable, and non- discriminatory; and
- To ensure that the system is reliable, effective, efficient, safe, accessible, affordable, and environmentally friendly

2.4 Municipal Structures Act (117/1998) - Powers and Functions of Municipalities

2.4.1 Chapter 5 Section 83 – General

A District Municipality must seek to achieve the integrated, sustainable and equitable social and economic development of its area as a whole by—

a) Ensuring integrated development planning for the District as a whole:
b) Promoting bulk infrastructure development and services for the District as a whole;
c) Building the capacity of Local Municipalities in its area to perform their functions and exercise their powers where such capacity is lacking; and
d) Promoting the equitable distribution of resources between the Local

Municipalities in its area to ensure appropriate levels of municipal services within the area.

2.4.2 Chapter 5 Section 84 - Division of Functions and Powers between District and Local Municipalities

A District Municipality has the following functions and powers:

a) Integrated development planning for the District Municipality as a whole including a framework for Integrated Development Plans for the local municipalities within the area of the District Municipality taking into account the Integrated Development Plans of those local municipalities.
b) Bulk supply of water that affects a significant proportion of Municipalities in the District.
c) Bulk supply of electricity that affects a significant proportion of Municipalities in the District.
d) Bulk sewage purification works and main sewage disposal that affects a significant proportion of Municipalities in the District.
e) Solid waste disposal sites serving the area of the District Municipality as a whole.
f) Municipal roads, which form an integral part of a road transport system for the area of the District Municipality as a whole.
g) Regulation of passenger transport services.
h) Municipal airports serving the area of the District Municipality as a whole.
i) Municipal health services serving the area of the District Municipality as a whole.
j) Firefighting services serving the area of the District Municipality as a whole.
k) The establishment, conduct and control of fresh produce markets and abattoirs serving the area of the District Municipality as a whole.
l) The establishment, conduct and control of cemeteries and crematoria serving the District as a whole.
m) Promotion of local tourism for the area of the District Municipality.
n) Municipal public works relating to any of the above functions or any other functions assigned to the District Municipality.
o) The receipt, allocation and if applicable the distribution of grants made to the District Municipality.
p) The imposition and collection of taxes, levies, and duties as related to the above functions or as may be assigned to the District Municipality in terms of National legislation.

2.5 Conclusion – Strategic Thrusts

The FTLM will focus its efforts and resources on the national, provincial and district transport strategic/policy principles. ITP positions itself as only one of a number of methods to achieve travel and movement objectives and visions. Accessibility planning and giving increased consideration to travel and movement during land use planning processes are also tools which are receiving growing recognition in pieces of legislation and policies. Through consideration of these, FTLM ITP is able to shape not just how people travel, but why, when and where people travel also. Ensuring that there is a strong link between the services available at and accessible from a particular location and the needs of the particular land use at that location can be used to realize significant social, economic and environmental benefits.

Chapter three

3 STATUS QUO OF PUBLIC TRANSPORT IN THE FTLM

3.1 Introduction

As part of preparing this ITP, the Municipality has compiled a Transport Register in accordance with Regulation No. 30506 dated 30 November 2007 attached as an Annexure A and the Minimum Requirements for the Preparation of ITPs, 2016 (Government Notice No. 40174) as Annexure B.

This Chapter contains a summary description of transportation system in FTLM and analysis of the results of the Transport Register based on the data collected for its preparation. This includes reviewing previous studies and surveys – such as the information obtained from the consultation with the public transport operators within and other statutory planning documents from the FTLM. The major public transport services relevant to the investigation are bus and taxi operations, and will be redressed in detail in the Rationalization Plan and Operating License Strategy respectively. There are no commuter rail services in the FTLM.

The ITP is relevant for the period from 2019 to 2024, and the five-year implementation plan and budget will be reviewed annually.

3.2 Overview of public transport

Public transport in the FTLM is mainly provided by taxis and buses. Taxi and bus travel account for more than 70% of total travel for all purposes and walking 17%. Metered taxi services provide very limited services, usually around big malls and big taxi/bus facilities. Due to the intensity of mining, company transport also exist, although not all companies provide such a service to its employees.

Public transport operations are mainly busy during the AM and PM peak periods. This includes company transport as well. As mentioned earlier, there are no commuter rail services.

3.3 Taxi operations and facilities profile

Within FTLM, there are several factors determining the nature, the distance, and utilization of routes and operational methods of the taxi industry. Among other factors is the location of towns and villages, dominant economic activities in the area and employment status within FTLM. As a result of these factors, operation of the taxi industry in certain areas and the type of service provided are irregular – i.e. use is sometimes made of certain routes as a result of demand and the pavement conditions of the road. In mining areas certain routes particularly the long distance routes are provided on certain Fridays, month-end, holiday(s) and long-weekends.

Most taxi ranks in FTLM are situated in the privately owned properties mostly shopping malls and centers whilst proportionally small segment are in the municipal land.

3.3.1 Taxi Operations in the FTLM

The dominant mode of public transport within FTLM is the mini-taxis. According to the Final IDP/Budget Review 2017-2018 there are approximately 287 and 530 taxi vehicles in the former Fetakgomo LM and Greater Tubatse LM respectively adding up to 817 taxi vehicles in Fetakgomo -Tubatse LM.

In the survey contacted the outward bound and inward bound taxi routes were individually identified. These routes virtually penetrate all the villages around the urban centres of Burgersfort, Steelpoort, Ohrigstad and Apel. Burgersfort town is and/or functions as public transport focal when looked at through the spatial structure particularly the radial nature of public transport into and from FTLM. However, a shortfall is that there is no real inter-modal system in these nodes. The buses and the taxis do not feed each other but generally compete along the same routes. There are 9 taxi associations based in FTLM (see Table 3.1) controlling at least 71 different routes, operated from at least 20 various different starting points (that will be, both formal and informal modal facilities).

3.3.1.1 Modal facilities (ranks) and taxi/bus association

Modal facility	Location	Status		Taxi
	Formal	Informal		Associations
Apel long distancetaxi rank	Apel	Formal		ATA
Atok taxi rank	Atok	Formal		ATA
Burgersfort local taxi rank	Erf 438 Burgersfort	Formal		DRUTA & ELLTA
Burgersfort long distance taxi rank	Erf 440 Burgersfort	Formal		BULLDTA
Lydenburg taxi rank	Erf 71 Burgersfort	Formal		BULLDTA
Twin city taxi rank	Erf 1082 Burgersfort Ex. 12	Formal		ELLTA
Tubatse Crossing taxi rank	Erf 8366 Burdersfort Ext. 31	Formal		DRUTA , ELLTA & TTA
Castle House &Cash Build taxi rank	Erf 222 Burgersfort Ext. 5		Informal	DRUTA & ELLTA
Ngwaabe taxi rank	Portion 19 of Leeuwvallei, 297 KT Burgersfort		Informal	BULLDTA
Steelpoort taxi rank	Steelpoort shopping centre	Formal		TTA & BULLDTA
Ohrigstad taxi rank	Erf 89 Ohrigstad	Formal		OLLDTA
Praktiseer taxi rank	Parktiseer	Formal		ELLTA
Driekop taxi rank	R37/Dilokong hospital intersection, Driekop	Formal		DRUTA
Ga-Maphopha village rank	Ga-Maphopha		Informal	
Khadima Taxi rank	Khadima Centre		Informal	DRUTA & ELLTA
Steel bridge	Steel bridge		Informal	
Moroke/Penge intersection	Moroke/Penge intersection		Informal	
Mohlaletse	Mohlaletse		Informal	ATA & STA
Leboeng	Leboeng		Informal	
Mohlaletse	Mohlaletse		Informal	ATA & STA
Burgersfort Bus Rank	Erf 71 Burgersfort	Formal		Great North Transport

Apel Bus Termini	Apel	Formal		
Burgersfort Intercity Transport rank	Erf 71 Burgersfort		Informal	Burgersfort Intercity Trans-port

3.3.1.2 Local taxi movement

In terms of destination, Burgersfort functions as fulcrum of the local taxi movement with the rest going to Praktiseer, Polokwane, Gauteng, Ohrigstad or Steelpoort. Taxis operating within the Municipality mainly use the tarred R37 (Burgersfort-Polokwane); R555 (Burgersfort- Steelpoort/Ohrigstad), D4250 (Apel-Apel Cross-Lebowakgomo) and D4190 (Apel-Sekhukhune-Steelpoort) roads. The poor condition of the gravel section of the D4190 that links Apel with the R37 poses a challenge to commuters as most taxi operators are unwilling to use the road.

3.3.1.1.1 Local taxi operations with starting point at Burgersfort

The taxi route system for the local taxi operations with starting point at Burgersfort is dividing into operations along the route R37, R555 (to Steelpoort) and R555 (to Ohrigstad) that are controlled by different associations:

- R37 towards Polokwane direction is operated by the Driekop Rehlophegile United Taxi Association (DRUTA);
- R555 (to Steelpoort) is operated by Tubatse Taxi Association and also the Burgersfort United Local and Long Distance Taxi Association (BULLDTA) which serves the village on the south- west part of FTLM;
- R555 (to Ohrigstad) which include Praktiseer and Penge is operated by Eastern Leolo Local Taxi Association (ELLTA) and Ohrigstad Local & Long Distance Taxi Association (OLLDTA).
- R36 (to Ohrigstad, Mpumalanga) is operated by Ohristad Taxi Association

3.3.1.1.2 Local taxi operations with starting point at Apel

The local taxi operations with starting point at Apel use route R579 and R37:

- R579 (to Lebowakgomo) is operated by Apel Taxi Association
- King Sekhukhune Road (to Mohlaletse) is operated by Apel Taxi Association and Sekhukhune Taxi Association
- D4190 (to Leporogong) is operated by Apel Taxi Association
- R579 (to Jane Furse) is operated by Sekhukhune Taxi Association

3.3.1.3 Long distance taxis operation

There are long distance taxis operating from three urban nodes going to areas beyond municipal boundaries such as Polokwane, Witbank, Jane Furse, Middleburg, Tembisa and Johannesburg. Revealed during surveys was that a large portion of long distance taxi Operating Licences (OLs) have both long distance and commuter authorities. These operators usually operate on commuter routes during the year and switch to their long distance routes when the passenger demand for these services increases during the festive season and Easter holidays. As such, quantifying the total available capacity of the long distance taxi industry is problematic.

3.3.1.4 Fare system

The minibus-taxis employ a post-boarding mainly for short/local trips and cash only, ticketless fare system for both local and long distance trips. Fares are either collected by drivers or their assistants, usually en-route after commencing the trip. There are substantial long distance taxi operations to and from the FTLM, mainly are from Burgersfort CBD, Apel Centre and moderately other areas of FTLM. They operate to about 20 different destinations.

3.3.1.4 Fare structure

In 2013, the NHTS found that on average users spend about R500 monthly on transit, or R20 a day. The median transit expenditure per passenger was about R400 a month, or R16 a day. It is estimated that, on average, households spend 20 percent of their income on public transport, but this varies by socio-economic status: the employed poor spend over 25 percent, minimum wage earners around 30 percent, and middle class and wealthy much less than average. Indeed, for many of the poor, public transport is unaffordable, although often unavoidable. Furthermore, the ticketing system rejects free-transfers between two bus/taxi routes and discounts to underprivileged groups.

3.3.2 Taxi rank facilities and service assessment, capacity and utilisation

This section focuses on modal facilities assessment and utilization, service capacity and capacity utilization per route in the peak period for FTLM. Taxi rank facilities in the FTLM were visited and assessed from the 11 to 15 November 2019. The purpose of the assessment was to determine the extent to which each facility was utilized by passenger operating vehicles. The assessment was done through the observation of each modal facility with specific focus on the conditions of the physical structure especially mandatory shelter/cover (for weather elements), ablution amenities and informal trading stalls. In determining route utilization, this is derived from the detailed data collated for the Transport Register through a combination of analyzing the timetables (in the case of scheduled services) or carrying out surveys (in the case of unscheduled services).

The minibus-taxi system presents a unique challenge when considering the effective utilisation of the available fleet. Traditionally, the utilisation would be a function of the

potential vehicle capacity versus the total passenger demand. The potential capacity would in turn be a function of the available vehicles and cycle time of each route and the passenger demand would vary along a route, with the highest level usually occurring in a single direction for a very short portion of a route. The flexible nature of the operations and lack of scheduling enables operators to delay departures until the taxis are full, or depart with empty taxis with the knowledge that further passengers will be picked up en- route, limiting the effectiveness of rank counts. There is also a tendency for taxi operators to have multiple route authorisations associated with one permit (numbered routes, radius, chartered) making it difficult to determine the total number of vehicles operating on each route. The complex nature of operations means that setting up stationary en-route counts can be problematic.

3.3.2.1 Data collection methods

Three methods of data collections were followed in this process, namely:

1) Interviews and engagements with the modals facility stakeholders (taxi associations' chairmen's, secretaries, rank marshals and queues marshal and drivers);
2) Manual counting of the vehicle leaving the modal facilities to determine both the rank and route utilization; and
3) Observations (photographs) for the physical infrastructural assessment.

The bus ranks that were visited are recorded in Table 3.2 below and the bus schedules for the modal facility that were visited are discussed in section to come.

Modal facility	Location	Status	Taxi Associations	Data collection dates				
				11 Nov 19	12 Nov 19	13 Nov 19	14 Nov 19	15 Nov 19
Burgersfort local taxi rank	Erf 438 Burgersfort	Formal	DRUTA & ELLTA					
Burgersfort long distance taxi rank	Erf 440 Burgersfort	Formal	BULLDTA					
Lydenburg taxi rank	Erf 71 Burgersfort	Formal	BULLDTA					
Twin city taxi rank	Erf 1082 Burgersfort Ex. 12	Formal	ELLTA					
Tubatse Crossing taxi rank	Erf 8366 Burdersfort Ext. 31	Formal	DRUTA , ELLTA & TTA					
Castle House & Cash Build taxi rank	Erf 222 Burgersfort Ext. 5	Informal	DRUTA					
Ngwaabe taxi rank	Portion 19 of Leeuwvallei, 297 KT Burgersfort	Informal	BULLDTA					
Steelpoort taxi rank	Steelpoort shopping centre	Formal	TTA & BULLDTA					
Ohrigstad taxi rank	Erf 89 Ohrigstad	Formal	OLLDTA					
Praktiseer taxi rank	Parktiseer	Formal	ELLTA					
Driekop taxi rank	R37/Dilokong hospital intersection, Driekop	Formal	DRUTA					
Ga-Maphopha village rank	Ga-Maphopha	Informal						
Khadima Taxi rank	Khadima Centre	Informal	DRUTA & ELLTA					
Steel bridge	Steel bridge	Informal						
Moroke/Penge intersection	Moroke/Penge intersection	Informal						
Mohlaletse	Mohlaletse	Informal	ATA & STA					
Leboeng	Leboeng	Informal						
Mohlaletse	Mohlaletse	Informal	ATA & STA					
Burgersfort Bus Rank	Erf 71 Burgersfort	Formal	Great North Transport					
Burgersfort Intercity Transport rank	Erf 71 Burgersfort	Informal	Intercity Transport					
Apel long distance taxi rank	Apel	Formal	Apel Taxi Association					
Atok taxi rank	Atok	Formal	ATA					
Apel Bus Termini	Apel	Formal						

3.3.2.2 Data Analysis and Interpretations

The analysis and the interpretation of the data collected reflect on the events of the modal facility during any other day of the month. That is, during the week when there are no special events such as holidays or day before the holiday and months ends or payday weeks. An engagement with the modal facility stakeholder also painted a big picture with regards to facility operations (such as, the operation times and the taxi queuing for different routes).

The photos taken depict the status quo of the modal facilities at the time when the survey was executed. The photos portray the current conditions of the shelters and the extent to which ablution amenities comply with the Occupational Health and Safety Act.

3.3.2.3 Taxi Modal Facilities within Burgersfort Area

There are five formal modal facilities within the area of Burgersfort town. Three of the modal facilities serve local destinations while the other two operate long distances. A detailed assessment of each modal facility is discussed in the subsequent subsection.

Map 3.1 shows the Google Earth's aerial view of the locations of taxi modal facilities within the vicinity of Burgersfort

3.3.2.3.1 Burgersfort Local Taxi Rank Facility

The rank is located in the Centre of the Burgersfort CBD on the municipal land and operated by two taxi associations (namely, Driekop Rehlophegile United Taxi Association (DRUTA) and Eastern Leolo Local Taxi Association (ELLTA) serving about 23 routes or areas within Fetakgomo Tubatse Local Municipality and beyond.

Main Routes: Alverton, Bothashoek, Diphale, Driekop, Driekop (Kamp), Ga-Motodi, Ga-Mpheti, Ga-Phasha, Ga-Riba, Ga-Selepe, Lebowakgomo, Mabocha, Makofane, Malokela, Mandagshoek, Motlolo, N1/Riba Cross, N2/Mashamothane, Penge, Polokwane, Praktiseer, Shakung.

3.3.2.3.1.1 Taxi Rank Status Quo

Office – Available for 2 taxi associations but the space was too small for administrative activities such as meetings.
Holding bays (for passenger vehicles in operation) – No enough space to serve as holding bays for passenger vehicles in operation.
Shelters – Dilapidated and not enough for passengers and informal traders alike; therefore rendering this space unsafe.
Pavements / information signs / fence – Dilapidated.

Electricity (lights) – Shelter lights not working.

Ablution – Use principle of "user pays" or paying before can be allowed to use. They were too few based on the number of routes that this rank served especially during peak hours

Figure 3.1: Burgersfort Local Taxi Rank

3.3.2.3.1 Burgersfort Local Taxi Rank Facility

The rank is located in the Centre of the Burgersfort CBD on the municipal land and operated by two taxi associations (namely, Driekop Rehlophegile United Taxi Association (DRUTA) and Eastern Leolo Local Taxi Association (ELLTA) serving about 23 routes or areas within Fetakgomo Tubatse Local Municipality and beyond.

Main Routes: Alverton, Bothashoek, Diphale, Driekop, Driekop (Kamp), Ga-Motodi, Ga-Mpheti, Ga-Phasha, Ga-Riba, Ga-Selepe, Lebowakgomo, Mabocha, Makofane, Malokela, Mandagshoek, Motlolo, N1/Riba Cross, N2/Mashamothane, Penge, Polokwane, Praktiseer, Shakung.

3.3.2.3.1.1 Taxi Rank Status Quo

Office – Available for 2 taxi associations but the space was too small for administrative activities such as meetings.
Holding bays (for passenger vehicles in operation) – No enough space to serve as holding bays for passenger vehicles in operation.
Shelters – Dilapidated and not enough for passengers and informal traders alike; therefore rendering this space unsafe.
Pavements / information signs / fence – Dilapidated.

Electricity (lights) – Shelter lights not working.

Ablution – Use principle of "user pays" or paying before can be allowed to use. They were too few based on the number of routes that this rank served especially during peak hours

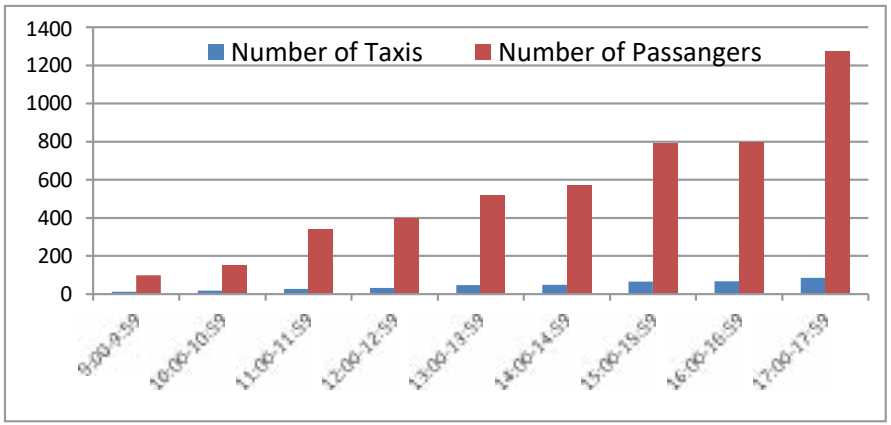


Figure 3.2: Hourly counting of the number of taxis that have conveyed passengers from the Burgersfort Local Taxi Modal Facility.

As depicted in Figure 3.2 above, there was a steady increase with the taxis leaving the modal facility with full load of passengers, and this trend reached maximum peak in the period between 17h00 to 17h59, with 90 taxis leaving the facility with a maximum of 1350 passenger ridership. Between 08h00 and 17h59, about 4995 passengers utilized this modal facility.

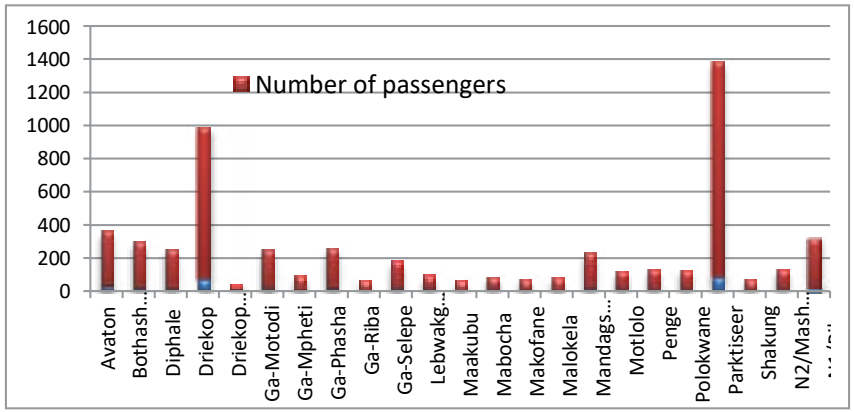
In general because of its demand-based operational nature, it is well understood that the taxi industry operates at capacity more especially at morning and evening peak hours. Table 3.3 evening peak hour give credence to this statement as service utilisation reached 100% at 17h00 to 17h59. From this it can be concluded that there is a fairly high level of utilisation of taxis in Burgersfort.

	Num-ber of Taxis	Number of Pas-sengers	Average Passen-gers per Taxi	As-sumed Taxi Capacity	Utilisation
9:00-9:59	12	98	8	15	53%
10:00-10:59	19	149	8	15	53%
11:00-11:59	27	341	12	15	80%
12:00-12:59	32	397	12	15	80%
13:00-13:59	47	521	11	15	73%
14:00-14:59	49	572	11	15	73%
15:00-15:59	66	791	12	15	80%
16:00-16:59	68	800	12	15	80%
17:00-17:59	86	1270	15	15	100%

Table 3.3: Burgersfort minibus-taxi vehicle supply and utilization

3.3.2.3.1.3 Local Taxi Rank Route utilisation and service supply from the Burgersfort

Figure 3.3 shows taxi average daily passengers, rank facility and route utilisation. Surveys were performed during the second week of November for a number of destinations (routes) from Burgersfort Local Taxi Rank.



utilisation

High number of passengers that translates to high movement/commuting between two places/areas (movement from the Burgersfort CBD to area of destination was recorded in Parkiseer and Driekop respectively as shown in Figure 3.3 above. Praktiseer considered a population concentration point characterized by a cluster of individual settlements with large number of people and high population density, and they usually have a small or no economic base but with meaningful social facilities and significant number of people. Prasktiseer and other areas (such as Riba Cross and Bothashoek) referred as population concentration points were mainly located adjacent to the tarred road or intersections of the main roads that provide accessibility to job opportunities elsewhere. Driekop on the other hand considered a Municipal Growth Point (MGP) due to the mining development occurring in the vicinity.

Traditionally, these areas with high number of passengers allude highly utilized routes and future traffic demand. However, determining which routes have high utilization – utilizations of different routes appeared to be significantly high as shown above. This determined from the average passengers per taxi over assumed taxi capacity appeared to suggest oversupply of taxis in all these routes. This would be ironic as new operating licenses were not issued at the time of the survey. This being one of operators' major grievances – where the regulator convinced that there was oversupply of minibus taxis. Figure
3.3 attest to this as areas with low ridership the route utilizations were still high.
The issue of minibus taxis oversupply resurfaced a national issue – at least in the Western Cape and KwaZulu-Natal, the regulators were also convinced there was in fact an oversupply of minibus taxis (Western Cape Government, 2005), a belief also shared by some transport academics. Moreover, attestation to this being a blue print of this issue making its way in the Integrated Transport Plans such as

City of Cape Town somewhat recent Comprehensive Integrated Transport Plan 2017-2022. Nationally, the increase in road-based utilisation could be directly attributed to the decline of rail. The minibus-taxi industry and bus services then becoming the main beneficiaries due to their larger spatial coverage. This issue is discussed further in this document and OLS.

3.3.2.3.1.4 Waiting time on public transport

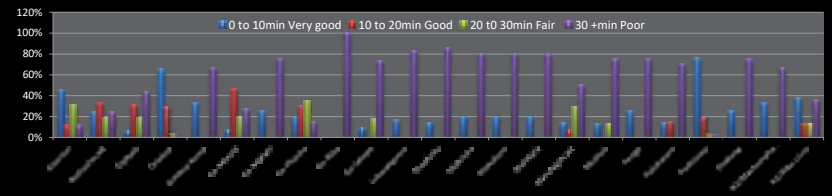


Figure 3.4: Burgersfort waiting time on public transport

In terms of accessibility and reliability the results as presented in Figures 3.4, are vital in ensuring that the positive or negative accessibility and mobility effects can be utilised in a way that lead sustainable urban mobility. Similarly, Stats SA (2014) undertook the National Household Travel Survey 2013 to gain a better understanding of the transport needs and behaviour of households that in turn will assist in identifying the disadvantaged regions and transport needs for investment in transport infrastructure – in the same manner Figure 3.4 extrapolates.

3.3.2.3.1.5 Summary

The taxi rank was too busy and congested. There was a traffic in the rank taxi – movements in and out was the challenge. The rank shelters could not accommodate all the taxis, there were taxis parked on the vehicle runaway making it too narrow while others utilised the holding area. The vehicles must have enough space to drive in and out of the loading bays. The condition of ablution facilities and the rank structure required maintenance. The informal traders occupied the passengers' islands with their tables under the shelters.

3.3.2.3.2 Twin City Taxi Rank Facility

The taxi rank is located in the Twin City Shopping Complex (also known as Spar Taxi Rank) private property and operated by Eastern Leolo Local Taxi Association (ELLTA) serving at least 7 routes or areas within FTLM and beyond.
Main Routes: Arconhoek, DE-OX, Dressden, Ga-Manoke, Matibidi, Ohrigstad and Taung

3.3.2.3.2.1 Taxi Rank Status Quo

Figure 3.5: Twincity Taxi Rank

Offices – Well managed and sufficient space for association administrative activities and meeting purposes.
Holding bays (for passenger vehicles in operation) – No enough space to serve as holding bays for passenger vehicles in operation.
Shelters, pavements, information signs – facility under the management of Twincity Shopping Complex, the area was neat and cleaned. The cameras installed to monitor the activity on the ground.
The informal trading catered for – with stalls with tables and chairs. However, no security fence installed but there was security personnel patrolling the area. There were also the floodlights in the area.

Electricity (lights) – Shelter lights were working

Ablution – The rank facility utilized the ablution amenities offered by the shopping complex.

3.3.2.3.2.2 Facility and Taxi Service-Supply Analysis and Utilization

Started operations at 08h00, this was the time when the first taxis registered and queued, until late when the last taxi left. The taxi rank facility utilization and taxi service supply steadily increased from 08h00 to 14h39 and slightly decreased from 15h00 to 16h59 and reached maximum at 17h00 to 17:59. At the latter period, there were 22 taxis, which left this rank with a maximum of 330 passenger's ridership.

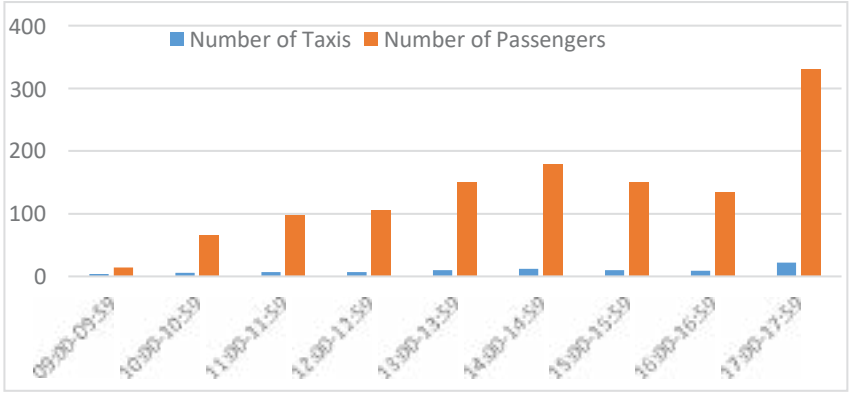


Figure 3.6: Hourly counting of the number of taxis that have conveyed passengers from the Twincity taxi rank

Between 08h00 and 17h59, about 1228 passengers utilized and departed from this modal facility. This points out to a fairly high level of utilisation of taxis in Twincity Taxi Rank.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	4	14	4	15	27%
10:00-10:59	6	66	11	15	54%
11:00-11:59	7	98	14	15	93%
12:00-12:59	7	105	15	15	93%
13:00-13:59	10	150	15	15	87%
14:00-14:59	12	180	15	15	80%
15:00-15:59	10	150	15	15	100%
16:00-16:59	9	135	15	15	100%
17:00-17:59	22	330	15	15	100%

Table 3.4: Twincity minibus-taxi vehicle supply and utilization

3.3.2.3.2.3 Route Utilization and service supply from the Twincity Local Taxi Rank

Figure 3.20 shows the passenger movement from the Twincity rank to the area of their destination or dwellings. The majority of people were travelling to Ga- Manoke followed by Dressden.

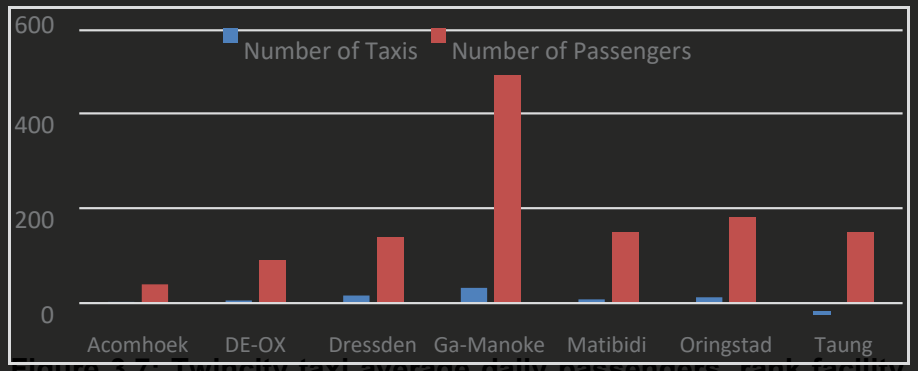


Figure 3.7: Twincity taxi average daily passengers, rank facility and route utilisation

3.3.2.3.2.4 Waiting time on public transport

The average waiting time on the public transport was revealed to be 30+ minutes indicating poor quality of transportation system.

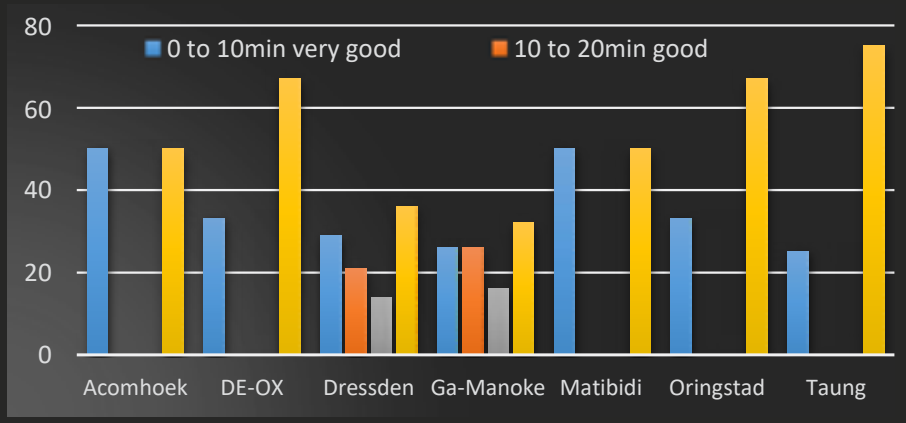


Figure 3.8: Twincity waiting time on public transport

3.3.2.3.1.5 Summary

The day to day management of the activities at the rank including the activities of the hawkers was in the hands of Twincity Shopping Complex. The queue marshals see to it that the drivers load at the right places and the passengers queue the allocated places. The modal facility was fully functional, and the safety and security of the commuters was ensured.

3.3.2.3.3 Tubatse Crossing Mall Taxi Rank Facility

It is located at the Tubatse Crossing Mall and it is in the privately owned property. The rank was built in 2013 and operated by two taxi associations being Driekop Rehlophegile United Taxi Association (DRUTA) and Tubatse Taxi Association – serving at least 6 routes or areas within FTLM and beyond.

Main Routes: Jane Furse, Ga-Masha, Ga-Phasha, Leborogong, Praktiseer and Steelpoort.

3.3.2.3.3.1 Taxi Rank Status Quo

Figure 3.9: Tubatse Crossing Mall Taxi Rank

Offices – Enough space used for association administrative activities and meeting purposes.

Holding bays (for passenger vehicles in operation) – No enough space to serve as holding bays for passenger vehicles in operation.
Shelters and bench seats – In good condition

Informal trading – trading cubicles created under the shelters and in good condition
Pavements/information signs/fence – Under the management of Tubatse Crossing Mall, the area was neat and cleaned and monitored by cameras. In addition, there was a high security fence and security patrols. There were also the floodlights in the area.
Electricity (lights) – Shelter lights working

Ablution – In good condition; use principle of "user pays" or paying before can be allowed to use.

3.3.2.3.3.2 Facility and taxi service-supply analysis and utilization

The operations commenced at 08h00, when the first taxis started to register and queue, until late when the last taxis left. The survey results indicated a steady increasing trend that reached the maximum at 17h00 to 17h59. It can be assumed that the majority of people that were using this facility were either working at the mall or were there for shopping activities. At the period of between 17h00 to 17h59, there were 40 taxis that left the Modal Facility with a maximum number of 600 passenger's ridership. Between 08h00 and 17h59, about 1749 passengers utilized and departed from this facility.

Figure 3.10 and Table 3.5 below depict modal facility analysis and utilization as well as taxi supply and utilization in different time periods until the closing of the rank at 18h00.

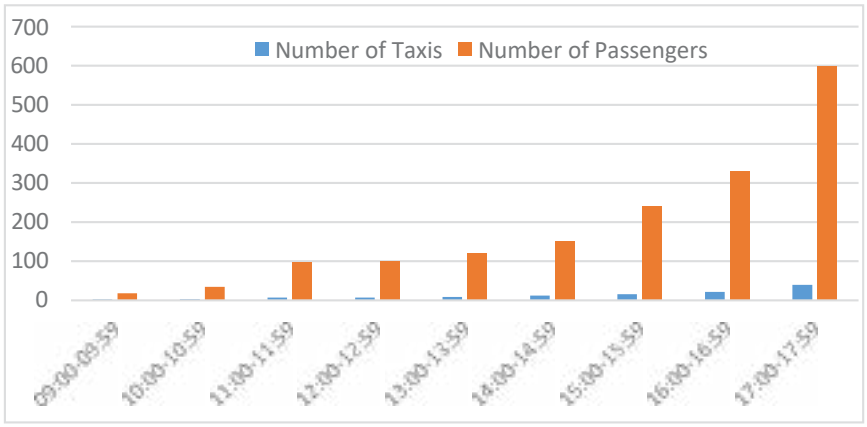


Figure 3.10: Hourly counting of the number of taxis that have conveyed passengers from the Tubatse Taxi Modal Facility

As illustrated in Table 3.5 there was a notably high level of utilisation of the Tubatse taxi modal facility and in general taxis in Burgersfort. The service utilisation was fairly high as early as 10:00 am and 80% was recorded and 100% reached at 15h00 to 17h59. From this was concluded that there was a fairly high level of utilisation of taxis in Burgersfort.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	2	18	9	15	60%
10:00-10:59	3	35	12	15	80%
11:00-11:59	7	98	14	15	93%
12:00-12:59	7	101	14	15	93%
13:00-13:59	9	120	13	15	87%
14:00-14:59	12	150	12	15	80%
15:00-15:59	16	240	15	15	100%
16:00-16:59	22	330	15	15	100%
17:00-17:59	40	600	15	15	100%

Table 3.5: Tubatse minibus-taxi vehicle supply and utilisation

3.3.2.3.3.3Route Utilisation and service supply from the Tubatse Crossing Taxi Rank

The commuters' movement from Tubatse Crossing Taxi Modal Facility to various areas of destination or dwelling as shown in Figure 3.11 below revealed that majority of people destination was Leborogong and Steelpoort respectively. Notably, Praktiseer still featured with a high number of people going there for the second time.

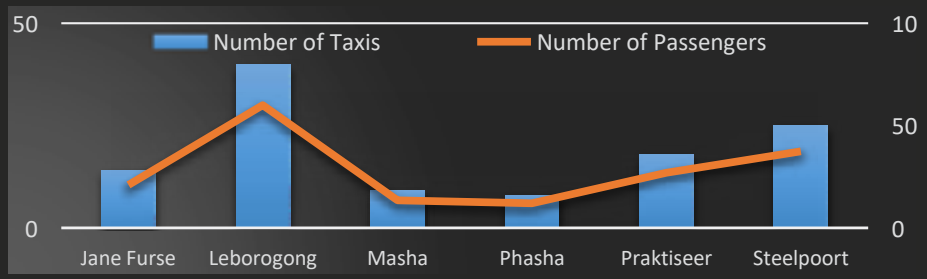


Figure 3.11: Route utilisation and service supply from the Tubatse Crossing Taxi Rank

3.3.2.3.3.4 Waiting time on public transport

The average passenger waiting time on the public transport is an important criterion in evaluating the quality of public transportation systems. Here, the average waiting time was revealed to be 30+ minutes indicating poor quality of transportation system.

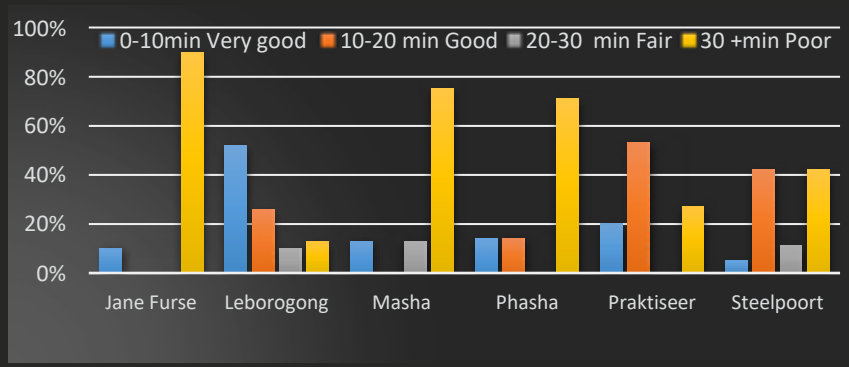


Figure 3.12: Tubatse waiting time on public transport ure 3.11: Route utilisation and service supply from the Tubatse Crossing Taxi Rank

3.3.2.3.3.5 Summary

Though the rank had clean and well cared for toilets, during the peak time passengers queued to use them. The need for additional toilets was identified. Overall, the taxi rank consisted of loading facilities (shelters, pavement and seating), ablution, informal trading places and sopping facilities. The modal facility was fully functional, and the safety and security of the commuters is protected

3.3.2.3.4 Burgersfort Long Distance Taxi Rank Facility

The modal facility is located behind the Burgersfort Shopping Mall and it is on the private property and operated by Burgersfort United Local & Long Distance Taxi Association (BULLDTA) serving about 7 routes or destinations beyond the FTLM as it was long distance taxi rank.
Main Routes: Johannesburg, Pretoria, Middleburg, Tembisa and Rustenburg

3.3.2.3.4.1 Taxi Rank Status Quo

Offices – There was office big enough to hold meetings and for administration purposes.

Holding bays – Enough space in the facility to be used as a holding bay for other taxis not in use

Figure 3.13: Burgersfort Long Distance Taxi Rank

Shelters, pavements, information signs – Most of the amenities were in good state, such as the shelters, pavements, information signs. The area was neat and cleaned, but there was no security fence and during the day of surveying, there was no security patrolling the area.

Informal trading – The informal traders had their own makeshift stalls for trading in the facility.

Electricity (lights) – Shelter lights were working.

Ablution – The facility use the ablution amenities offered by the mall.

3.3.2.3.4.2 Facility and taxi service-supply analysis and utilization

The operations commenced at 07h00 marked by the first taxis registered and in queue, till late when the last taxi left, depending on the demand for transport. As illustrated in Figure 3.14, an average of two taxis left the facility hourly on the day of the survey. The last taxi to leave the modal facility was at 16h55, and from there the rank ceased its operations. Between 07h00 and 17h00, there were 23 taxis that left the modal facility with a total of 327 passenger's ridership.

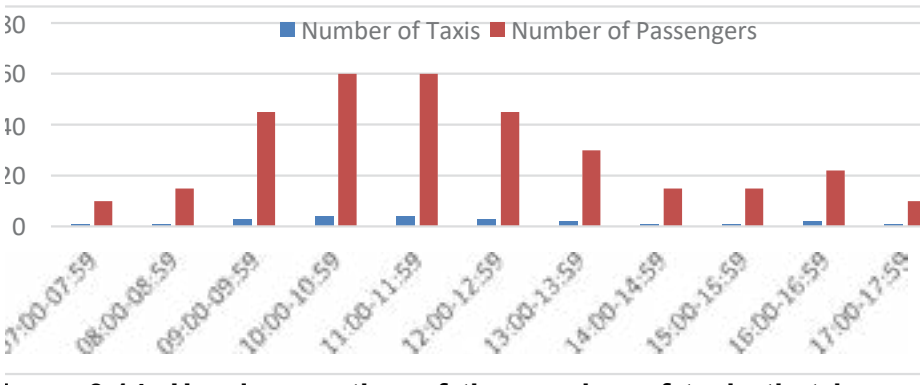


Figure 3.14: Hourly counting of the number of taxis that have conveyed passengers from the Burgersfort Long Distance Facility

As indicated before there was oversupply of the minibus taxi. Interestingly, here with assumed taxi capacity of 15 seater, average passenger per taxi is 14. This means the usage of minibus taxi has been consistently high throughout the day translating to high route utilization based on the out movement of the minibus taxis.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
07:00-07:59	1	10	10	15	67%
08:00-08:59	1	15	15	15	100%
09:00-09:59	3	45	15	15	100%
10:00-10:59	4	60	15	15	100%
11:00-11:59	4	60	15	15	100%
12:00-12:59	3	45	15	15	100%
13:00-13:59	2	30	15	15	100%
14:00-14:59	1	15	15	15	100%
15:00-15:59	1	15	15	15	100%
16:00-16:59	2	22	11	15	73%
17:00-17:59	1	10	10	15	67%

Table 3.6: Burgersfort Long Distance minibus-taxi vehicle supply and utilization

3.3.2.3.4.3 Route utilization and service supply from the Local Taxi Rank

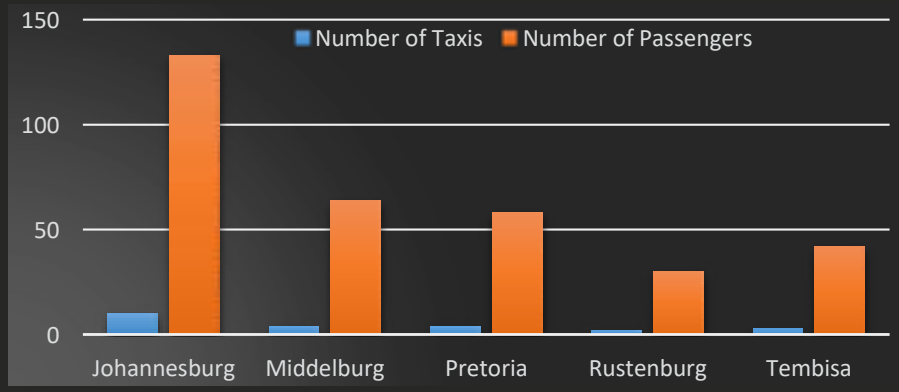


Figure 3.15: Route utilization and service supply from the Burgersfort Long Distance Taxi Rank

The ridership of minibus taxis had consistently been high throughout the day – this high taxis activity translate to fairly high route utilization as determined both in trips made and passengers ferried in Figure
3.15 above.

3.3.2.3.4.4 Waiting Time on Public Transport

The waiting time on taxis to be full especially in the morning and evenings. Is significantly high. This seemed to be a common phenomenon in long distance destinations – travellers appear to wait for daily commuter's morning peak hours to finish first. As a result those who got to taxi rank early waited long on public transport as illustrated below in Figure 3.16 below.

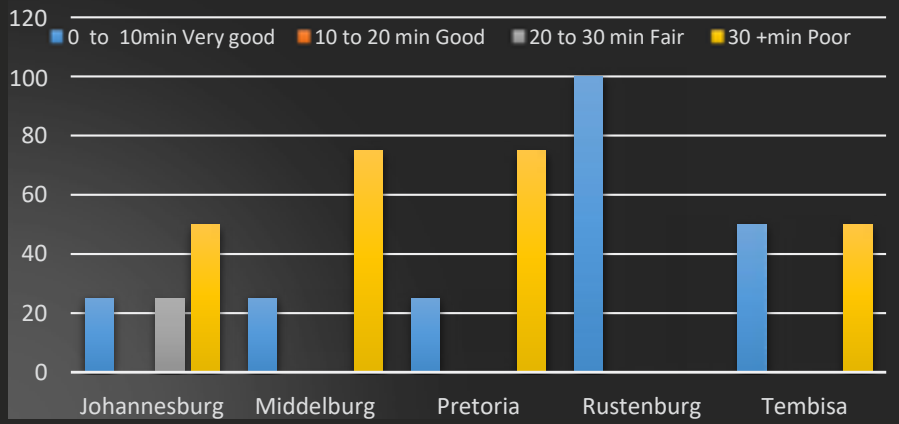


Figure 3.16: Burgersfort Long Distance Waiting time on public transport

3.3.2.3.4.5 Summary

The taxi rank did not have waiting area seats. Therefore, being a long distance travelers facility they should be considered. The facility has to consider inclusion of informal trader's stalls that would contribute to the economic activity. However, the modal facility was fully functional and user friendly.

3.3.2.3.5 Lydenburg Taxi Rank Facility

Lydenburg taxi modal facility is located next to Morone Shopping Centre in Burgersfort on the municipal property and operated by Burgersfort United Local & Long Distance Taxi Association (BULLDTA) and serving 2 long distance routes or destination (Lydenburg and Nelspruit).

Main routes: Lydenburg and Nelspruit

3.3.2.3.5.1 Taxi Rank Status Quo

Figure 3.17: Lydenburg Taxi Rank

Offices – No office, its operations and/or administration were dispensed from Burgersfort Long Distance Taxi Rank.
Holding bays (for passenger vehicles in operation) – No enough space in the rank to be used as a holding bay for other taxis not in use.
Pavements/information signs/fence/Shelters and bench seats – These amenities were in poor state. The area is filthy and not maintained and there is no security fence or security patrolling the area.

Informal trading – The hawkers had their own makeshift stalls for trading in the premises, but they were also in a poor condition.

Electricity (lights) – There were lights in the area.

Ablution – There was ablution facility within the vicinity of a taxi rank.

3.3.2.3.5.2 Facility and taxi service-supply analysis and utilization

On the day of the survey between 07h00 and 17h00 a low ridership was recorded in the modal facility. Of 22 taxis that were in the modal facility, there were 8 taxis with a total of 87 passenger's ridership left the taxi rank. This translates to oversupply of taxis and underutilization of this facility analyzed on the basis of passengers ridership.

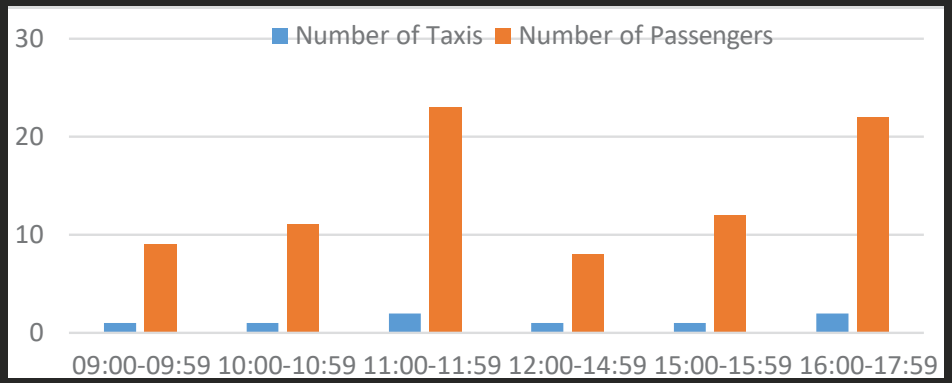


Figure 3.18: Hourly counting of the number of taxis that have conveyed passengers from the Lydenburg Taxi Rank Facility

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	1	9	9	15	60%
10:00-10:59	1	11	11	15	73%
11:00-11:59	2	23	12	15	80%
12:00-14:59	1	8	8	15	53%
15:00-15:59	1	12	12	15	80%
16:00-17:59	2	22	11	15	73%

Table 3.7: Lydenburg minibus-taxi vehicle supply and utilization

3.3.2.3.5.3 Route utilization and service supply from the Local Taxi Rank

As this determinant works on origin-destination basis, the number of taxi trips and number of passengers Figure 3.19 below displays fairly high route and rank facility utilization in surveyed destinations (both Lydenburg and Nelspruit).

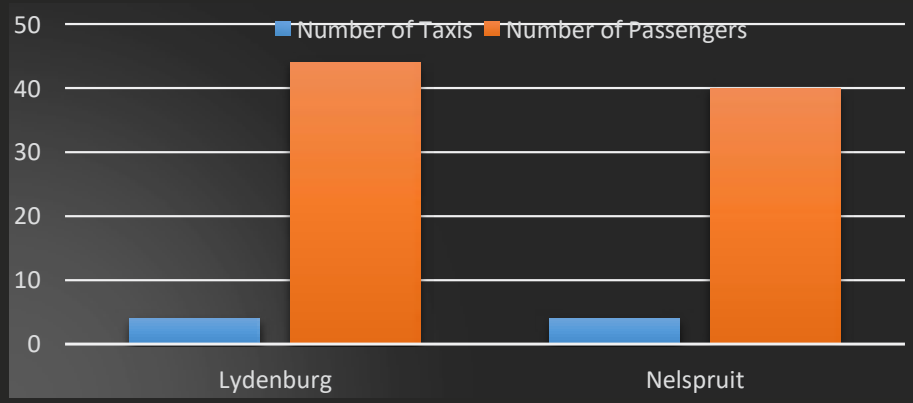


Figure 3.19: Route utilisation and service supply from the Lydenburg Taxi Rank

3.3.2.3.5.4 Waiting time on public transport

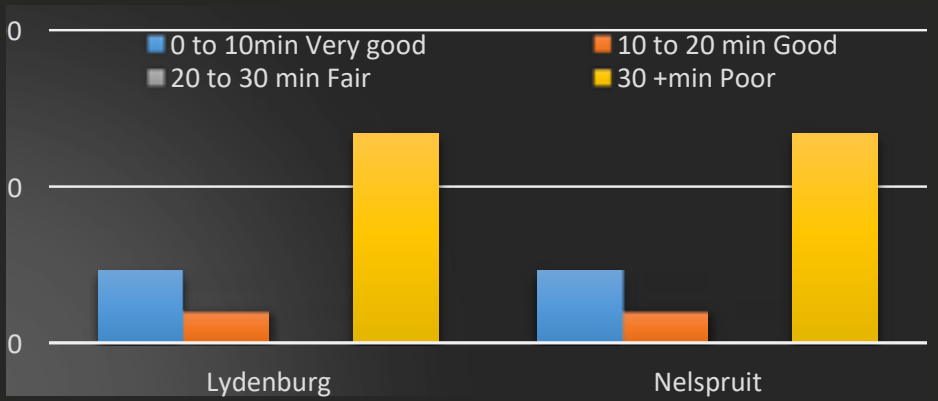


Figure 3.19: Route utilisation and service supply from the Lydenburg Taxi Rank

The majority of people waiting time on public transport at this facility at the day of the survey was +30 minutes. On the basis of the criteria used in this study translating to poor service. The average passenger waiting time on public transport is an important

criterion in evaluating the quality of transportation quality (Amin-Naseri & Baradaran, 2014).

3.3.2.3.5.5 Summary

The standard of the facility has deteriorated and lacked necessary amenities as a result there is a need for infrastructural resuscitation and provision.

3.3.2.3.6 Informal Taxi Ranks and Holding Areas

The holding areas for taxis were at the designated points as shown below.

Figure 3.21: Holding areas photographical view within Burgersfort

The queue marshal provided information and instruction to taxis at the holding area, on where and when to proceed towards the taxi stand, based on passenger demand.

3.3.2.4 Other Taxi Rank Facilities within FTLM

3.3.2.4.1 Apel Long Distance Taxi Rank Facility

The Apel Taxi Rank is located in the western part of the FTLM and Apel is the most prominent node followed by Atok in this part of the municipality. The taxi rank facility is situated on the private land, owned and operated by the Apel Taxi Association (APA).

The APA had 134 taxis serving about 10 routes or destinations within and beyond the FTLM. Basically, this modal facility is a long distance taxi modal facility. However, minimal trips each taxi had amongst others resulted in the APA supplying local trips services.

Major Routes: Ga-Seroka (Ga-Nchabeleng, Mohlaletse, Ga- Makotanyane, Maroteng, Ga-Phasha, Mapulaneng, Tshwereng, Ga- Mmakopa proceed to Ga-Seroka), Leborogong, Steelpoort, Burgersfort, Atok, Burgersfort, Jane Furse, Polokwane, Lebowakgomo, Johannesburg, Pretoria, Tembisa.

3.3.2.4.1.1 Taxi Rank Status Quo

Offices –office space enough for the Taxi Association administration and staff exist.
Holding bays (for passenger vehicles in operation) – enough space in the facility to be used as a holding bay for other taxis not in use exist.
Shelters, pavements, information signs – the paving was destroyed because it had not been maintained and the fencing was also in dilapidated state. There is need for adequate lighting for safety reasons. The current roof structure was not compatible with high built minibus taxis vehicles like Sprinters.

Figure 3.22: Apel Long Distance Taxi Rank

Informal trading – municipal market stalls situated adjacent to the taxi rank but this facility was highly under-utilized because the hawkers did not want to pay for the use of the facilities.

Electricity (lights) – Shelter lights were not working.

Ablution – There were ablution amenities within the modal facility. However, they were not fully functional because there was no running water.

3.3.2.4.1.2 Facility and taxi service-supply analysis and utilization

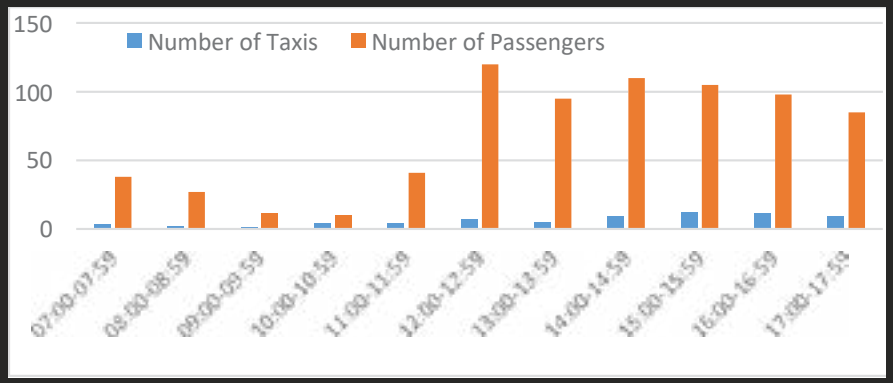


Figure 3.23: Hourly counting of the number of taxis that have conveyed passengers from the Apel Long Distance Taxi Rank Facility

The modal facility utilization determined on the basis of taxi service supply, taxi trips and number of passengers – the facility assumed the high utility during the midday. Seemingly, most outside trips (long distance trips) intensify during the midday while majority of these short distances public transport commuters were low – they assume high percent taxi ridership during the morning and evening. It is important to point out that in this facility there were majority of both 15 and 22 seater minibus taxis. On the day of survey the service of long distances was conducted mostly by the 22 seater mini-bus taxis. As a result assumed taxi capacity was derived from their median.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
07:00-07:59	3	38	12	19	63%
08:00-08:59	2	27	13	19	68%
09:00-09:59	1	11	11	19	58%
10:00-10:59	4	10	3	19	16%
11:00-11:59	4	41	10	19	53%
12:00-12:59	7	120	17	19	89%
13:00-13:59	5	95	19	19	100%
14:00-14:59	9	110	12	19	63%
15:00-15:59	12	105	8	19	42%
16:00-16:59	11	98	9	19	47%
17:00-17:59	9	85	9	19	47%

Table 3.8: Apel minibus-taxi vehicle supply and utilization

3.3.2.4.1.3 Route utilization and service supply from the Local Taxi Rank

The route utilisation and service supply from the modal facility to destination – working it on origin-destination and the number of trips (taxi trips) and the number of passengers was as illustrated in Figure 3.24 with Apel Cross having the most of taxis activity. Therefore, assuming route utilisation on the basis of the number of passengers it was observed that it was slightly higher than what was recorded. The short/local trips minibus taxis employed a post-boarding and most taxis left the modal facility not full mainly if they have waited long time on loading platforms to load passengers along the entire route. Apel Taxi Rank to Ga-Nchabeleng, Mohlaletse, Ga-Makotanyane, Maroteng, Ga-Phasha, Mapulaneng, Tshwereng, Ga-Mmakopa proceed to Ga-Seroka was a typical example where passengers may be loaded and off-loaded along the entire route.

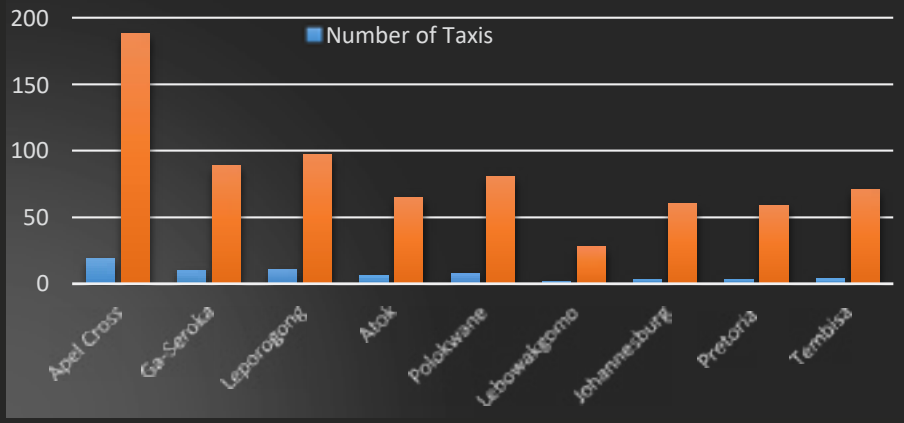


Figure 3.24: Route utilisation and service supply from the Apel Taxi Rank

3.3.2.4.1.4 Waiting time on public transport

The short/local trips minibus taxis though they have assumed some sort of timely schedule on the account of post-boarding most passenger still waited long time on the public transport in this modal facility. The reason being that the waiting time on public transport measure is everything between daily commutes to long-distance travel.

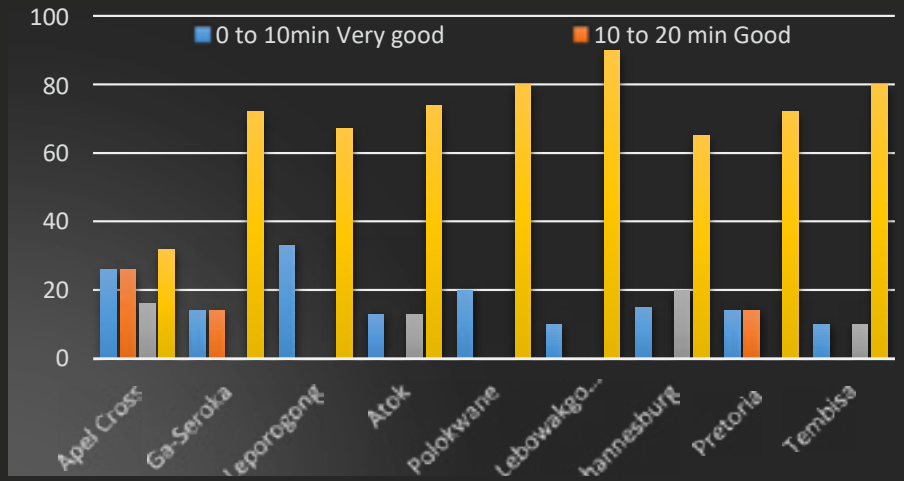


Figure 3.25: Apel waiting time on public transport

3.3.2.4.1.5 Summary

Taxis operate on routes where buses should operate. In certain routes passengers wait long for taxis because they pass the area full especially on peak hours. 3.3.2.5.1 Dilokong Taxi Rank Facility

The survey for Dilokong taxi rank was conducted at the rank located at the Dilokong Hospital facility entrance operated by Driekop Rehlophegile United Taxi Association (DRUTA) serving route to Burgersfort.

Main Routes: Burgersfort

3.3.2.5.1.1 Taxi Rank Status Quo

Figure 3.26: Dilokong Taxi Rank

The status quo analysis of this modal facility focused on abolition amenities, holding bays and health, safety and environment as there was no infrastructure to comment about due to its informality. The modal facility was not user friendly, especially during the wet weathers. There was no enough space in the rank to be used as a holding bay for other taxis not in use. There were ablution amenities within the vicinity of a taxi modal facility, but they belonged to the Hospital waiting area.

3.3.2.5.1.2 Facility and taxi service-supply analysis and utilization

The operation commencement was determined by the first taxis to queue and registration ensued, until when the last taxi left, depending on the demand for transport. During the day of the survey, the taxis started queueing at 7h00 and the passengers that started arriving from 8h45 waited on the platform and the boarding started at 09h00. In most cases, only one taxi was leaving the taxi rank per hour, the majority of taxis that left the modal facility were recorded during the period 11h00 to 13h59 reaching the peak at 12h00 to 12h59.

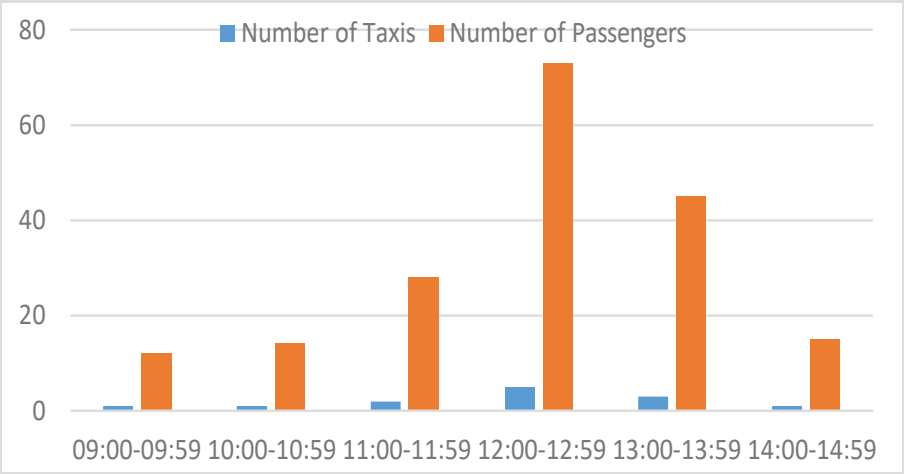


Figure 3.27: Hourly counting of the number of taxis that have conveyed passengers from the Dilokong Taxi Facility

The average passengers per taxi is impressively high though number of taxis that loaded passengers is low. The utilization of modal facility derived from number of passengers per assumed taxi capacity was on average 92% and throughout the day, a significant number of taxis were dropping off passengers at the entrance of the hospital.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	1	12	12	15	80%
10:00-10:59	1	14	14	15	93%
11:00-11:59	2	28	14	15	93%
12:00-12:59	5	73	14	15	93%
13:00-13:59	3	45	15	15	100%
14:00-14:59	1	15	15	15	100%

Table 3.9: Dilokong minibus-taxi vehicle supply and utilization

3.3.2.5.1.3 Route utilization and service supply from the Local Taxi Rank

The end destination from this modal facility is Burgersfort. Between 09h00 and 15h00, there were 13 taxis which left the Modal Facility with a total of 187 passenger's ridership

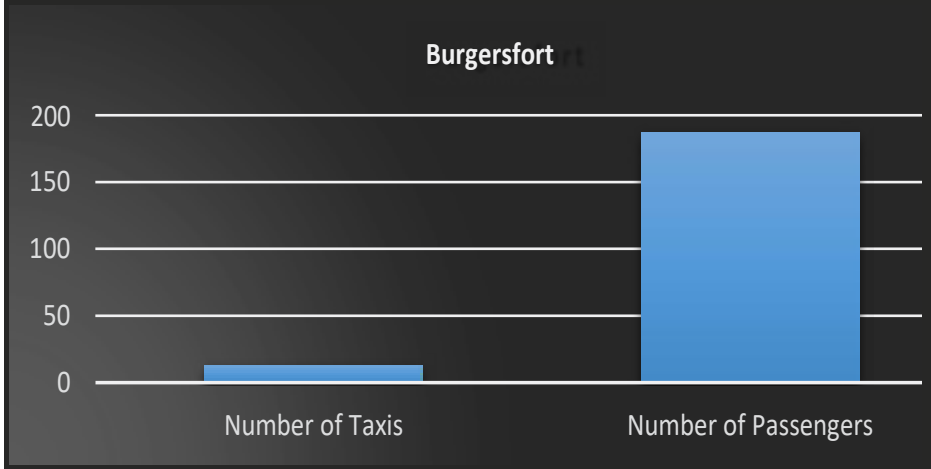


Figure 3.28: Route utilisation and service supply from the Dilokong Taxi Rank

3.3.2.5.1.4 Waiting time on public transport

The value of waiting time on public transport was relatively high. This was also assessed in the form of the average hour interval for the taxi to fill-up

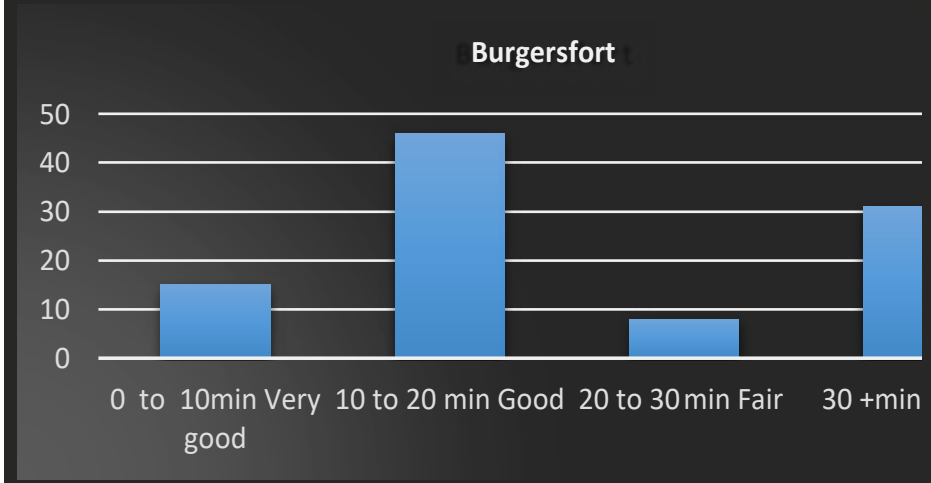


Figure 3.29: Dilokong waiting time on public transport

3.3.2.5.1.5 Summary

The rank had no important elements. However, there is a new rank next to the junction of R37 and Dilokong road consisting of loading, ablution and informal trading facilities. This modal facility has all the necessary amenities, but it is still waiting for an official handover for usage.

3.3.2.5.2 Praktiseer Taxi Rank Facility

This facility is located at the junction between district road D4150 from Bothashoek and the road entering Praktiseer-band is operated by Eastern Leolo Local Taxi Association (ELLTA) serving the route to Burgersfort.

3.3.2.5.2.1 Taxi Rank Status Quo

Figure 3.30: Praktiseer Taxi Rank

There were taxi association offices at Burgersfort Local Taxi Rank Facility. The rank facility had a shelter, the pavement, no water, no lighting and no security fence. There was no any ablution amenity within the vicinity of the taxi rank. The infrastructure was neglected and in a very derelict condition.

3.3.2.5.2.2 Facility and taxi service-supply analysis and utilization

On the day of the survey, the operations commenced at 08h00 to 16h00. The majority of the taxis (at least 6 taxis per hour) leaving the taxi rank were recorded at the period 09h00 to 11h00.

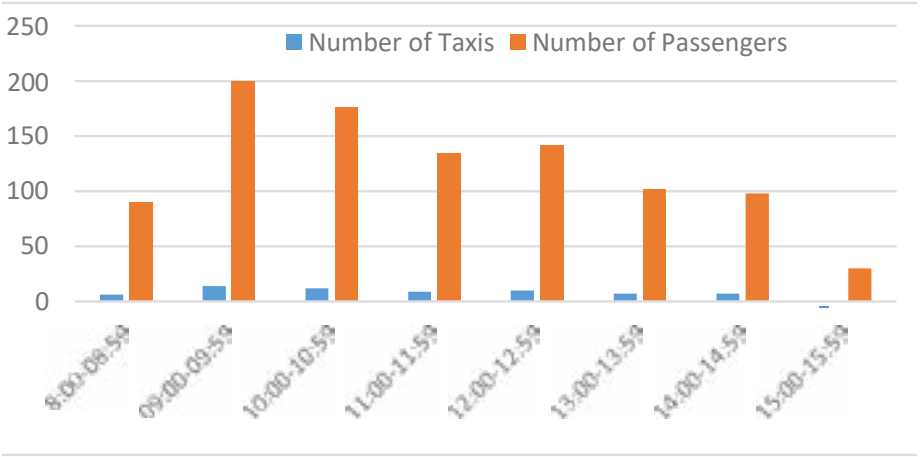


Figure 3.31: Hourly counting of the number of taxis that have conveyed passengers from the Praktiseer Taxi Rank Facility

With Burgersfort being the only end destination this rank facility was fairly utilized as the record revealed high ridership (973 passengers) serviced by 67 minibus taxis.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
8:00-08:59	6	90	15	15	100%
09:00-09:59	14	200	14	15	93%
10:00-10:59	12	176	14	15	93%
11:00-11:59	9	135	15	15	100%
12:00-12:59	10	142	14	15	93%
13:00-13:59	7	102	14	15	93%
14:00-14:59	7	98	14	15	93%
15:00-15:59	2	30	15	15	100%

Figure 3.31: Hourly counting of the number of taxis that have conveyed passengers from the Praktiseer Taxi Rank Facility

3.3.2.5.2.3 Route utilization and service supply from the Praktiseer Taxi Rank

Deduced from the modal facility utilisation and an observation that significant number of taxis operate from the street – the route utilisation was unquestionably high as shown in Figure 3.33 below.

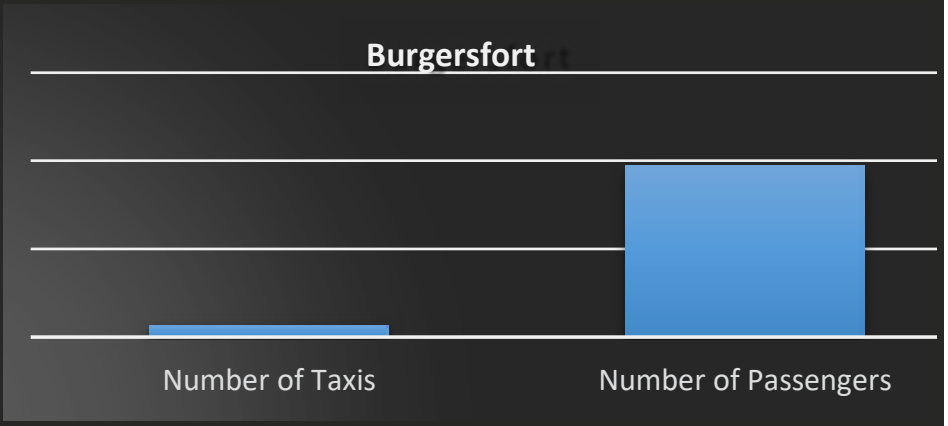


Figure 3.33: Route utilization and service supply from the Praktiseer Taxi Rank

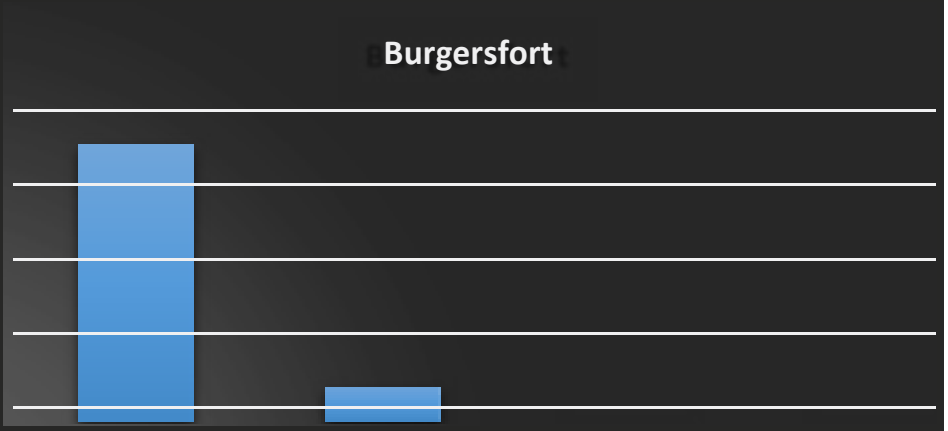


Figure 3.34: Praktiseer waiting time on public transport

3.3.2.5.2.4 Waiting time on public transport

Though generally the main challenge public transport system face is the uncertainty of taxis movements – on the day of the survey majority of taxis filled up within a short period of time hence the highest waiting time on public transport was recorded at 0 to 10min interpreted to be very good.

3.3.2.5.2.5 Summary

The most controversial element of a rank is the ablution facilities, since these usually require constant care. The most common problem here was said to be blockages in the sewerage system due to the use of the wrong paper or of flushing objects down the toilets, and damage to the toilet bowls, hand basins and taps. The informal traders need to be repositioned they were hindering the proper functioning of the taxi rank by selling their ware on the passenger islands or vehicle runways or by obstructing the free passage along pedestrian areas.

3.3.2.5.3 Steelpoort Taxi Rank Facility

This modal facility is situated in the shopping mall which is privately owned land. There were two associations operating in that area, namely, Tubatse Taxi Association and Burgersfort United Local & Long Distance Taxi Association (BULLDTA).

Figure 3.35: Steelpoort Taxi Rank

3.3.2.5.3.2 Facility and taxi service-supply analysis and utilization

This rank facility started its operations at 08h00 and ceased at 18h00. During the survey the modal facility was fairly utilized throughout the day – an average of 10 taxis leaving the facility per hour and number of passengers and taxi service reaching its peak at 15h00 to 15h59.

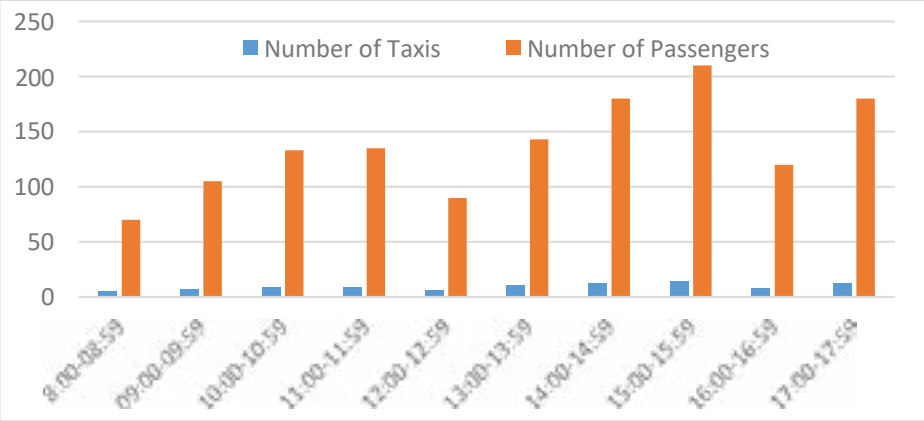


Figure 3.36: Hourly counting of the number of taxis that have conveyed passengers from the Steelpoort Taxi Rank Facility

Table 3.11 below further depicts the high utilisation of modal facility and taxi services on average of 98%.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
8:00-08:59	5	70	14	15	93%
09:00-09:59	7	105	15	15	100%
10:00-10:59	9	133	14	15	93%
11:00-11:59	9	135	15	15	100%
12:00-12:59	6	90	15	15	100%
13:00-13:59	10	143	14	15	93%
14:00-14:59	12	180	15	15	100%
15:00-15:59	14	210	15	15	100%
16:00-16:59	8	120	15	15	100%
17:00-17:59	12	180	15	15	100%

Table 3.11: Steelpoort minibus-taxi vehicle supply and utilization

3.3.2.5.3.3 Route utilization and service supply from the Local Taxi Rank

Number of end destinations were recorded in this taxi rank facility and most of routes fairly utilized as deduced from number of trips and the observation that significant number of outward taxis operated from the streets.

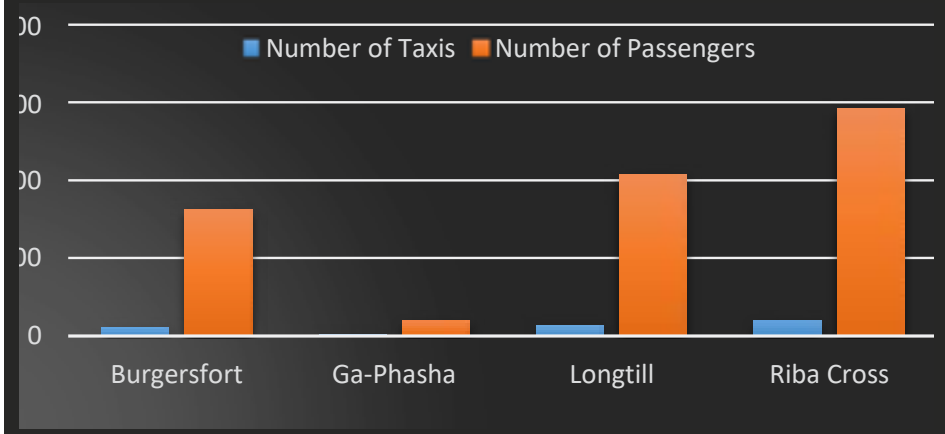


Table 3.37: Steelpoort minibus-taxi vehicle supply and utilisation

3.3.2.5.3.4 Waiting time on public transport

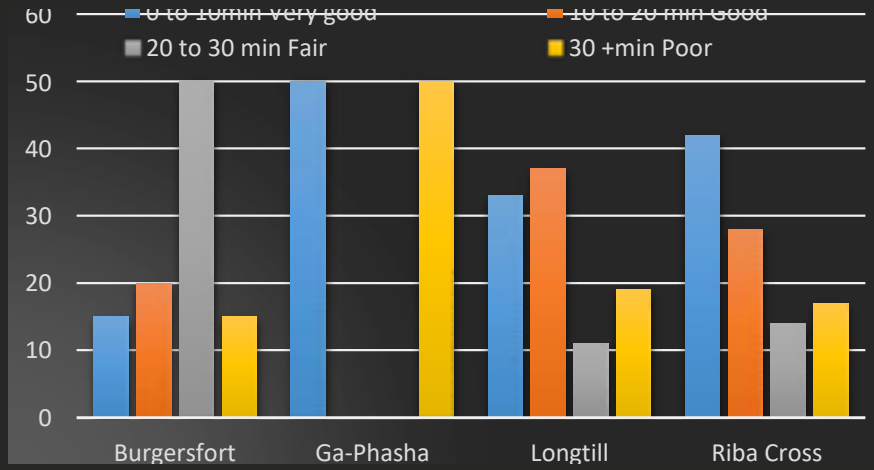


Figure 3.38: Steelpoort waiting time on public transport

3.3.2.5.2.4 Waiting time on public transport

Though generally the main challenge public transport system face is the uncertainty of taxis movements – on the day of the survey majority of taxis filled up within a short period of time hence the highest waiting time on public transport was recorded at 0 to 10min interpreted to be very good.

3.3.2.5.2.5 Summary

The most controversial element of a rank is the ablution facilities, since these usually require constant care. The most common problem here was said to be blockages in the sewerage system due to the use of the wrong paper or of flushing objects down the toilets, and damage to the toilet bowls, hand basins and taps. The informal traders need to be repositioned they were hindering the proper functioning of the taxi rank by selling their ware on the passenger islands or vehicle runways or by obstructing the free passage along pedestrian areas.

3.3.2.5.3 Steelpoort Taxi Rank Facility

This modal facility is situated in the shopping mall which is privately owned land. There were two associations operating in that area, namely, Tubatse Taxi Association and Burgersfort United Local & Long Distance Taxi Association (BULLDTA). The waiting time was arguably fairly distributed on the various categories and end destinations throughout the day as shown in Figure 3.38 above.

3.3.2.5.3.5 Summary

The facility was on the private property and the taxi associations had an obligation of paying rent. The non-payment in the past resulted in suspension of taxis in the facility. This rank has big operations that depend on the success of the memorandum of the co-operation agreement on the taxi associations and the facility management.

3.3.2.5.4 Ohrigstad Taxi Rank Facility

The modal facility is located at the entrance of Ohrigstad along the R36 road coming from Hoedespriut direction. The facility is built next to the Total garage. It is operated by Ohrigstad Local and Long Distance Taxi Associations (OLLDTA) and serves both the local and long distance routes and areas within Fetakgomo- Tubatse Local Municipality (FTLM) and beyond.

3.3.2.5.4.1 Taxi Rank Status Quo

Figure 3.39: Ohrigstad Taxi Rank

The modal facility had an office space for the association to dispense administration and operations. However, it was indicated that the space was not enough for the holding of the meetings. The shelters, pavements and information signs were fairly in a good state. The modal facility has enough space to accommodate most of the vehicles and passengers however there was a need for vehicle holding area. There was no security fence surrounding the facility and no floodlights around. The makeshift informal trader's stalls were available for traders. There were ablution amenities however in a much deteriorated state (structurally and water supply problem) within the vicinity of the taxi modal facility. Overall, this modal facility was easily accessible, and user friendly with well-maintained and clean environment.

3.3.2.5.4.2 Facility and taxi service-supply analysis and utilization

During the survey, at least a taxi per hour was leaving the taxi rank and on average carrying 6 passengers

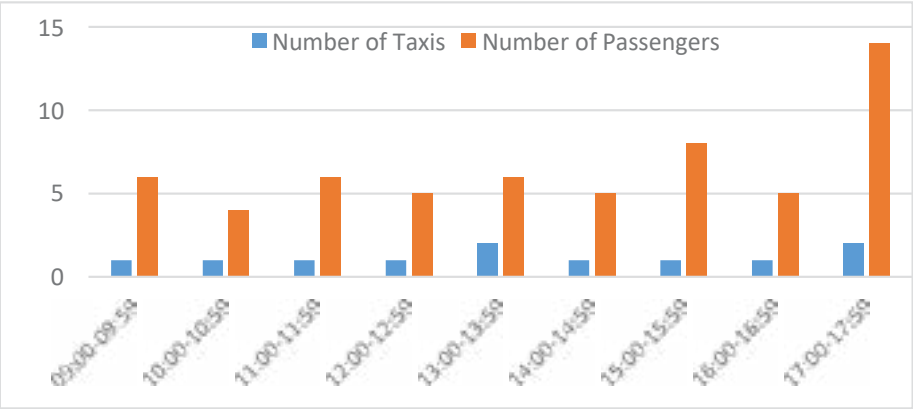


Figure 3.40: Hourly counting of the number of taxis that have conveyed passengers from the Ohrigstad Taxi Rank Facility

The low ridership in this modal facility was attributed to hitch-hiking as passengers common complain being that taxis take a long time to be full and waiting an hour for it to resume its trip was unbearable and

waste of time. As the result the modal facility and taxi service recorded a very low utilisation of 36% on average.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	1	6	6	15	40%
10:00-10:59	1	4	4	15	26%
11:00-11:59	1	6	6	15	40%
12:00-12:59	1	5	5	15	33%
13:00-13:59	2	6	3	15	20%
14:00-14:59	1	5	5	15	33%
15:00-15:59	1	8	8	15	53%
16:00-16:59	1	5	5	15	33%
17:00-17:59	2	14	7	15	46%

Table 3.12: Ohrigstad minibus-taxi vehicle supply and utilization

3.3.2.5.4.3 Route utilisation and service supply from the Local Taxi Rank

On the day of the survey the majority of people were going to Leboeng, with less taxi trips in both destinations the route utilization understandably becomes significantly low on the basis of reasons provided in the preceding analysis.

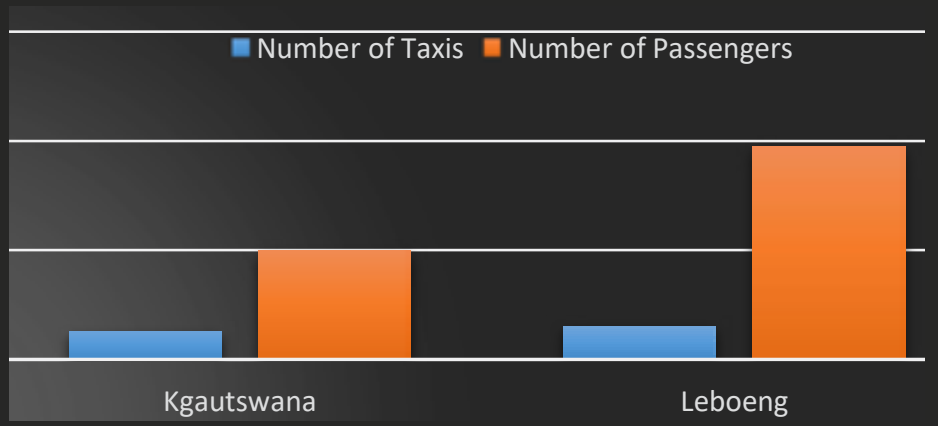


Figure 3.40: Hourly counting of the number of taxis that have conveyed passengers from the Ohrigstad Taxi Rank Facility

3.3.2.5.4.4 Waiting time on public transport

Figure 3.42: Ohrigstad waiting time on public transport

The waiting time of close to an hour was recorded, and significant number of passengers could not wait for taxis to get full; therefore, they went to the hitchhiking spot.

3.3.2.5.4.5 Summary

In locational sense, the area was rural and predominantly consists of informal workers (farm workers). Most of commute movement took place to farming working places and predominant mode of transport was the Lorries or light vehicles picking people certain designated points not a modal facility. This resulted in low mini-bus taxi ridership and another contributing factor hitchhiking attributed to long waiting time for taxis to be full.

3.3.2.5.5 Ga-Oria Taxi Modal Facility

Ga-Oria taxi rank is informal taxi modal facility serving users to Masemola, Masha, Maisela, Mamone, Malegale, Seroka, Phaahla, Mohlalese, Mashabela, Marishane, Jane Furse and Lebowakgomo. Sekhukhune Taxi Association (STA) was recorded as sole operator of Ga Oria taxi rank.

Main routes: Masemola, Phaahla, Mashabela and Marishanet

3.3.2.5.5.1 Taxi Rank Status Quo

There were no facilities on this taxi rank and unpaved without shelters as depicted in pictures.

Figure 3.43: Oria Taxi Rank

3.3.2.5.5.2 Facility and taxi service-supply analysis and utilization

This taxi rank operates like awaiting place where users connect to various destinations. Most of taxis left this modal facility half full – on average carrying 8 passengers per hour on the day of the survey.

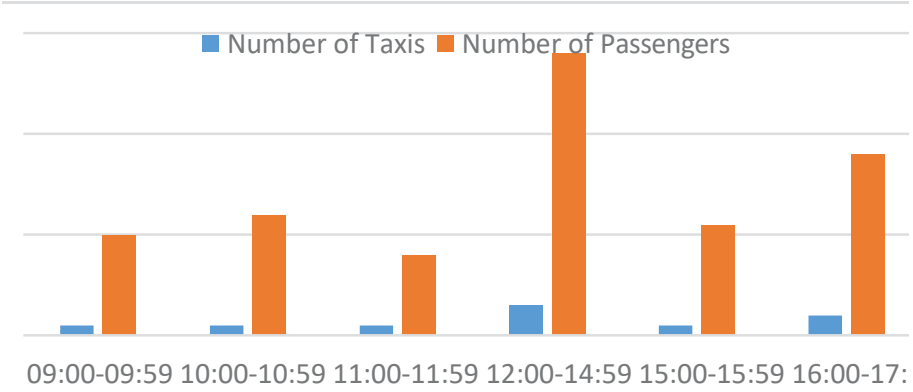


Figure 3.44: Hourly counting of the number of taxis that have conveyed passengers from the Oria Taxi Rank Facility

The graph above shows that the majority of trips took place between 12:00 to 14:59. At this time a high volume of taxis dropping off passengers connecting to other destinations was observed.

	Number of Taxis	Number of Passengers	Average Passengers per Taxi	Assumed Taxi Capacity	Utilisation
09:00-09:59	1	9	9	15	60%
10:00-10:59	1	11	11	15	73%
11:00-11:59	2	23	11	15	73%
12:00-14:59	1	8	8	15	53%
15:00-15:59	1	12	12	15	80%
16:00-17:59	2	22	11	15	73%

Table 3.13: Oria minibus-taxi vehicle supply and utilization

3.3.2.5.5.3 Route utilisation and service supply from the Local Taxi Rank

In FTLM, Ga-Oria is one of the least trip attractors and various end trips are at an average of 2 making them lowest strip attractors. Other external areas (trips outside FLTM) from Ga-Oria recorded zero trips during the survey.

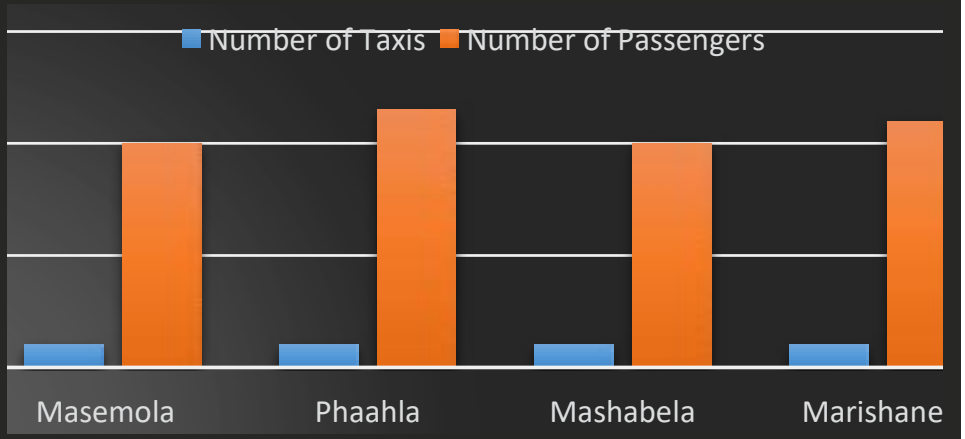


Figure 3.45: Route utilization and service supply from the Oria Taxi Rank

3.3.2.5.5.4 Waiting time on public transport

From the graph below, majority of passengers can wait an hour or more for a taxi to leave a taxi rank because of low ridership. This is due to multiple effects such as area rural setting that can translate to low economic activity, less job centres, road and transport network supply resulting in long passenger waiting times.

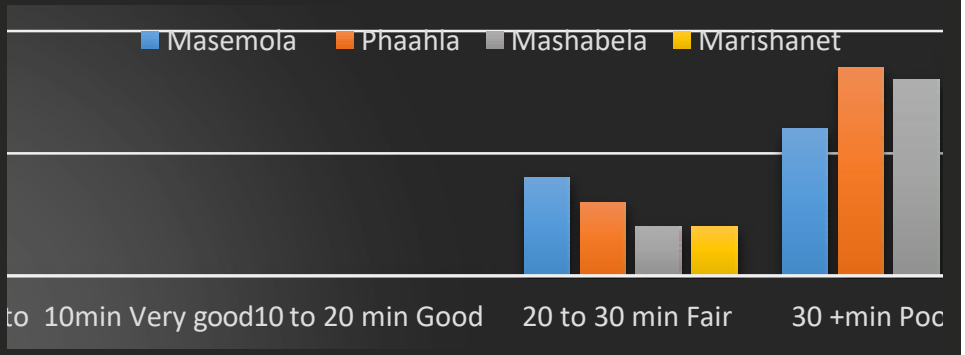


Figure 3.46: Oria waiting time on public transport

3.3.2.5.5.5 Summary

Route utilisation and service supply from the Ga-Oria taxi rank is not reflective of the reality of this modal facility as its trips have the origin and destination as captured here. There are also external routes that have neither an origins nor destination in Ga-Oria but make stop at this facility to pick up passengers.

3.3.2.6 FTLM minibus taxis survey findings summary

The summary of the survey findings of the nine minibus taxi ranks is presented here.

3.3.2.6.1 Total number of taxis and total number of passengers

The surveys conducted for the minibus taxis (public transport use) in FTLM shows that a total of approximately 800 taxis ferried 10 283 passengers per day in surveyed FTLM taxi ranks. These are taxis that their trips have the origin in FTLM modal facility. Thus, taxi rank utilisation has been assessed as shown in Figure 3.47 below.

Taxi Ranks	Number of Taxis	Number of Passengers
Burgersfort local	406	4939
Twin city	87	1228
Tubatse Crossing	118	1692
Burgersfort long	23	327
Lydenburg	8	85
Apel long	67	740
Dilokong	13	187
Praktiseer	67	973
Ga Oria	11	112
Total	**800**	**10283**

Table 3.14: FTLM Total number of taxis and passengers per day

3.3.2.6.2 FTLM taxis modal facility utilisation

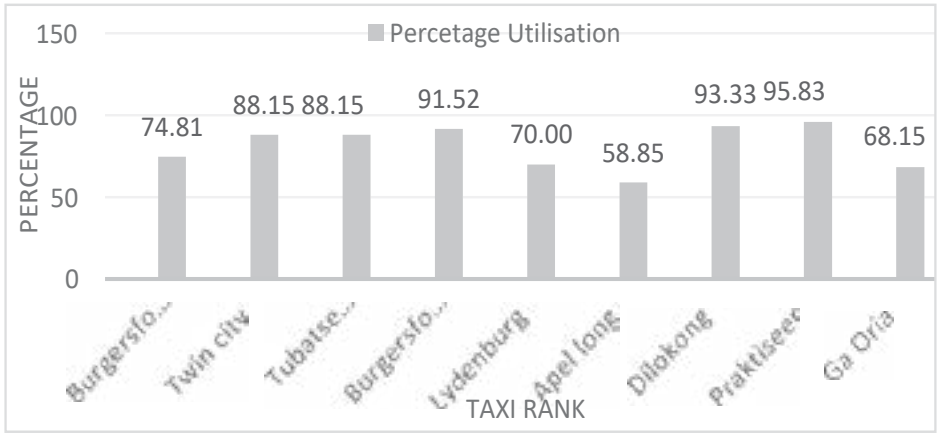


Figure 3.47: FTLM taxi ranks utilisation

From the graph above, Praktiseer has the highest utilisation at 95.83%. Overall, Burgersfort taxi ranks utilisation is impressively high and these taxi ranks have highest trip generator and assumingly highest route utilisation. Between the peak periods, there is a lack of demand, and taxis remain idle at the central taxi ranks, taking up valuable space. Taxis only leave the taxi ranks when they have reached full occupancy, and the operators' state that it leads to very few trips if any at all in this period of the day. The result is that potential taxi passengers during daytime can wait very long time before the taxis get filled up.

3.3.2.6.3 Supply and demand

FTLM public transport is provided by 15-seat taxis, metered taxis (avanza cabs, 4+1 cars, etc.), and standard buses operated by Great North Transport Bus Company and other bus operators. The taxis, metered taxis, bakkies, LDVs, buses and paratransit modes are the dominant form of public transport for most passengers. The public transport system accounts for over 80 percent of all motorized trips, carrying about 20 million passengers annually.

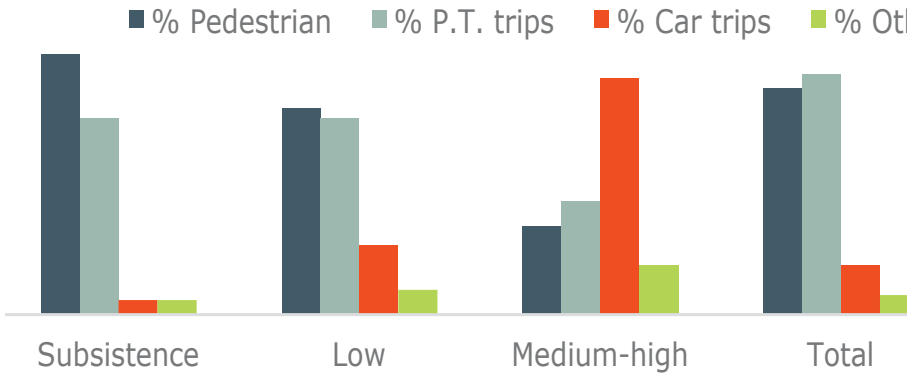


Figure 3.48: Modal split by socioeconomic group

Households with higher incomes have a higher share of car trips and a lower share of pedestrian trips than households with lower incomes. Overall, public transport does not provide an acceptable level of service, in part due to the following:

3.3.2.6.3.1 Unorganised routes and structure

Due to unlawful operations (no operating permits) resulting in irregular routes and lack of defined stops. As a result significant number of passengers must transfer at least once, especially on the way home after work. Without a common ticketing system, those transferring would need to pay twice, an expense that leaves many, especially the poor, to walk long distances instead. But if public transport routes were structured to provide boarding near major destinations such as job centres, schools, public service or shops, about half of public transport passengers would save one-third of their costs on each trip, according to NHTS 2013 estimates. Such savings could add, say, 5-7 percent to household budgets for food consumption or discretionary expenditure. With multiplier effects, such savings may spur economic growth equivalently.

3.3.2.6.3.2 Metered taxis supply and demand

It appears that metered taxis (Avanza's, 4+1's) are now carrying an increasing share of passengers, perhaps because of quick to fill and serving irregular routes offering more flexible transport as they are able to pick users up and drop off nearly wherever they want them to as they have no aligned route.

3.3.2.6.3.3 Network supply and congestion

Network supply and vehicle types do not match demand. Given the existing route structure, there is a lack of capacity in morning and afternoon rush hours, resulting in long passenger waiting times. Congestion now makes it impossible for one vehicle (4+1 or taxi) to make more than three trips during the morning and afternoon peak periods. Along the R37 corridor to Burgersfort CBD, a conducted survey (traffic counts) reveals that more than 5000 inward passengers used public transport along this route during weekday morning peak hour. This estimate is deduced from a count of more than 300, 15- seater taxi trips to city centre. These taxis and metered taxis (Avanza's, 4+1's) contribute to congestion, which in turn decrease travel speeds and substantially lengthen trip times. Faced with similar demand, other cities have moved to bigger busses, prioritised bus lanes or even set up a full bus-rapid-transport (BRT) system. Such solutions can ensure faster travel times and less congestion in Burgersfort.

For the most part, the public transport routes cover the densest areas. Still, with this routing, many people must walk between half to one kilometre to get a bus. Long walks and long waiting times combine overall service is of a low quality. Many public transport passengers still have long walks home, on average some 12.5 minutes, but in many cases, particularly in peri-urban areas, much further. The average public transport passenger, like their pedestrian counterpart, faces an exhausting ordeal to get home each day, which impacts on home and family life. Reorganising the public transport system to provide a more appropriate and efficient service could significantly reduce travel times and costs, particularly on the homeward leg, with significant positive social and familial impacts. Direct services between job centres and residential areas could also affect demand patterns and incentivise lower order commercial services, such as food outlets, to relocate in residential areas.

3.3.2.6.3.4 Other challenges of public transport system

Other shortcomings of the public transport system are: limited night- time service, overcrowded and poor-quality vehicles, widely-spaced and unsheltered bus stops, unsheltered public transport terminals, absent sidewalks. Embarkation points are randomly spaced, making transfer very difficult. Generally, Avanza's and 4+1 services are unsafe for on-board passengers as well as for pedestrians and other vehicles in the vicinity.

3.4 Bus information in the FTLM

The route utilization survey recorded 18 Great North Transport buses and a number of other private bus transport companies like, Sekhukhune express, Nnyanashakwane bus services, Mahlangu bus services, Thembalethu bus services, Midbank buses and Vuthimlilo and Segweka bus services are providing service in this municipal area. At the district level there are two different types of bus operators, classified as: subsidized operators and non-subsidized operators. The former Greater Tubatse LM had a widespread route of bus services with average route length of 58km. The regular commuter bus services, that is Great North Bus Services, was not subsidized or contracted by the Limpopo Department of Roads and Transport within the FTLM as set out in Table 3.16 below.

Operator	Location of Operator	Type of Operations
Great North Transport	Former Great Tubatse LM	Casual and scholar passengers
Mahlangu Bus Services	Former Great Tubatse LM	Mine and scholar passengers
Sekhukhune Express	Former Great Tubatse LM	Mine passengers
Thembalethu Bus Company	Former Great Tubatse LM	Mine and scholar passengers

Table3.16: Distribution of non-subsidised bus operators in SDM

Bus companies and sole proprietors who operate small fleets were contacted who could provide the information on the list of routes they operate, permits, timetables, passenger statistics and tariff information. A combination of questionnaire and request for information was used to capture the bus information. The 'Great North Transport' was the only bus operator within the Municipality with conventional fixed routes and a fixed schedule system that provides passengers with public transport to work in the morning and back to home in the evening. Although some operators have operating permits, their services are by and large unscheduled. In general, no detailed information was obtained about these operations. Outstandingly, survey and in various reviews and reflections reveal that the road conditions were generally very poor in FTLM, especially in the rural areas. Routes such as Mathakane route were not accessible during wet weather and generally poor road condition that sometimes prompt terminations of Great North Bus Services operation bring about hard felt financial pinch/hardship to the operator as it was one of the most performing routes for the operator. Such road conditions are a significant factor on the operating life of the rolling stock, operating costs, and level of service to the passenger.

According to the SDM Final IDP/Budget Review 2017-2018 the transport routes in Sekhukhune are often limited by deteriorating roads conditions as well as local storm water problems caused by rainy seasons and identified also the following challenges:

- there is oversupply of taxis on most of routes – as aforementioned the buses and the taxis do not feed each other but generally compete along the same routes;
- deterioration of road infrastructure;
- lack of facilities for heavy vehicles;
- inadequate signage;

- lack of the bus loading zone within the Burgersfort CBD, and this create a traffic law transgression when the passenger has to be off loaded or boarded by the bus;
- Unscheduled bus operators competing for passengers with the scheduled bus operators; providing services within, to or from GTM. These unscheduled operators

Both Scheduled and unscheduled bus services provide a variety of services, including being contracted by the mine to transport the staff, private hire services for specific events, learner transport and other services within and outside of the FTLM. Former GTLM ITP (2016) reveals that the National Department of Transport's e-NaTIS system1 recorded that there are about 405 for use in public transport licensed in the GTLM. Table3.17 indicates the bus routes in the FTLM.

Bus Route	Time Schedule
Mahlatse to Plokwane	06h00
Ga Machacha via Ga-Oria via Nkwana to Burgersfort (Tubatse)	07h00
Phahlamanoge to Jane Furse via Seroka, Mahlaletse, Nchabeleng and Mphanama	06h00-07h00
Rostock to Jane Furse	06h00
Mabulela via Selepe to Burgersfort	06h00
Johannesburg to Fetakgomo	Friday
Ga-Mmachaka via Oria Ga-Nkwana, Atok to Burgersfort	06h00
Mphanama, Matlala, Nchabeleng, Apel cross to Jane Furse	07h00
Mashilabele, Mmela, Radingwana, Mphanama, via Diphagane to Jane Furse	08h00
Leporongong via Nkoana, Mahlaletse, Mashilabela to Jane Furse	

Table 3.17: Bus routes in Fetakgomo

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3.5 Rail information

Based on the information gathered during the process of documentation review relevant to the study area has become apparent that "At present no commuter rail transport services were in operation in the Fetakgomo- Tubatse Local Municipality and the entire Sekhukhune District Municipality. Spoornet owned the whole rail network in the province. The infrastructure was in relatively good condition and the rail stations in Mogalakwena, Modimolle, Bela-Bela and Pienaarsrivier were the main stations. Railway transport of general freight was only rendered in Ohrigstad, Burgersfort and Steelpoort.

This ITP does not contain any commuter transport provisions due to the lack of current services. The department of Transport has since promised the construction of multimodal transport facility in Burgersfort town but to date nothing is coming forth. However, this should be revised once commuter rail services are re-established in the region. Therefore, an intermodal planning community dealing with commuter rail transportation will also be required.

3.6 Non-Motorized Transport (NMTs)

In some areas NMTs were used as an alternative mode of transport, most especially in rural areas. It emerged during the survey and consultation with municipal officials that these modes of transport play a significant role in conveying goods and people and a consideration is that they should be fully incorporated into the transport system of the municipality. It should be noted that in some parts of the Sekhukhune District Municipality the NMTs have been formalized as a recognized mode of transport which is in line with intermodals. However, there is a need for policy and strategy to promote the use of these modes. Municipality should prioritizes public transport infrastructure to enhance its accessibility by the commuting community as currently not easily accessible and there were issues of safety. In remote areas that are located away from Burgersfort, there were no proper feeder routes that link with the provincial and national road network. The quality of the pedestrian system and its facilities are equally important for commuters using public transport. There are significantly high pedestrian volumes in FTLM. There is a need for provision of sidewalks, improve access of municipality and district rural roads by way of community based construction and maintenance projects (e.g sidewalks, roads). Such improved transport infrastructure would be able to attract NMTs and thus contributing to the solid infrastructure that encourages seamless transport system.

To achieve optimal NMTs the public must be educated about the relationships between the modes and the following considered:

a) Bicycle use

- the rights and responsibilities of cyclists be defined by regulation; and these regulations must be enforced;
- the public should be informed of the social and personal benefits of bicycles relative to other modes for the relevant categories of trips;
- The local municipalities should encourage the provision of safe bicycle parking at schools, shopping centers and even at the work place.
- provide proper bicycle infrastructure and bicycle paths and lanes as these are the main infrastructure elements defining bicycle transportation as a distinct system;
- the local municipalities must prepare a plan that would encourage the use

of bicycles and provide the necessary infrastructure;

- the Provincial Department of Transport should launch a campaign to promote the use of bicycles as one mode of non-motorized transport, and support the District and Local Municipalities with the construction of bicycle facilities;
- Contracted buses should incorporate bicycle racks to encourage commuters to utilize bicycles for part of their journey, where possible;
- the Departments of Transport and Education and the District Municipalities should develop a non-motorized transport plan and meet the specific needs of learners in cases where pedestrian facilities, bicycles and donkey-cart transport are appropriate

b) Pedestrian travel

- there is a need to prioritize the provision and maintenance of sidewalks;
- provide paths and sidewalks for basic safety and protection from motorized vehicles;
- pedestrian planning must consider the enhancement of existing pedestrian systems or the provision of new ones;
- these should consist of safe and attractive sidewalks, independent walkways and, in recreational areas, campuses and major developments, networks of paths that are functional and aesthetically appealing;

3.7 Metered Taxi operations

Metered taxi operations have been identified as one of the significant operations in some towns such as Burgersfort and Apel, particularly because of their complementary role they could play in providing transport during awkward hours. In Apel operating permits were issued previously. Generally, majority of metered taxis in FTLM are unregulated and informal – posing a threat to road users as majority of them are not road-worthy.

The survey revealed that month end and weekends myriad of unofficial transport providers' mushroom taking advantage of a high volume of weekend operations to transport shoppers from rural hinterlands to Burgersfort. Moreover, those illegal operators another market niche were passengers who might have travelled at night and reach their respective destinations (taxi/bus ranks) very early in the morning or late in the evenings who happen to be stranded at that time after drop off. They either pay unreasonable amounts or they do not reach their destinations. The municipality is unsettled and discomforted by this criminal activities linked this kind operations – it is fighting and rejecting this operation through Limpopo Provincial Transport Registrar currently handling the issues of their operating license.

There are currently meter taxis operating in Burgersfort CBD registered with Intercity Transport Association. The current fleet is estimated to be approximately 120 operating between Aloeridge and Thaba Moshate Casino. These taxis are officially operated and the bear a sticker distinguishing them from unofficial "no name' taxis. No name meter taxis are said to operate in the jurisdiction of minibus taxis as a result the conflicts ensued with their respective Taxi Association operating's on the same routes or areas.

3.8 Learner Transport

There is a need for the Department of Transport and Department of Education to co-ordinate efforts and funding for learner and student transportation in FTLM. At present, no subsidized public transport system available for the learners in the FTLM. Majority of the urban learners rely on foot or general public transport, private transport, private school buses or privately arranged special transport to go to school. However, marginally though some of the urban areas such as Burgersfort and Steelpoort, schools offered school buses for learner transport. In rural areas and in some parts where the road was gravel the bakkies or adapted light delivery vehicles (LDVs) were used.

Figure 3.43: Depicting Light Delivery Vehicles used to ferry learners

With the reference to the use of bakkies or adapted light delivery vehicles, Section 71 of the National Land Transport Act, Act No.5 of 2009 states:

… adapted light delivery vehicle may be used for public transport services in a particular area in prescribed circumstances where there is no other appropriate or acceptable public transport, and subject to prescribed conditions.

This provision of NLTA is consistent with FTLM scholar transport usage since most areas are rural and the communities are improvised. Therefore, LDVs that are roadworthy should not be rejected as means of transport for learners. What came out consistently in relation to leaner transport is that:

- transport for learners should be affordable and subsidized
- public transport be made accessible to enable learners reach the educational institution on time
- non-motorized transport for learners be implemented
- reduce the distance learners have to walk to and from school
- provide safe, reliable and affordable transport for learners

3.9 Light Delivery Vehicles (LDVs)

LDVs were generally used as public transport in all areas of FTLM, especially in remote rural areas and farming areas. LDVs may be used as means of transport for scholars. However, there was safety concern that, in terms of an accident, it looks very ugly. The option is to subsidise scholars who use either taxis or buses. However, LDVs may be used for conveying agricultural produce, not people.

3.10 Transport for People with Disability

The survey team observed that the current public transport system in FTLM does not seem to be user-friendly for disabled persons. The general lack of public transport infrastructure in the area appeared to be the main reason for this problem. It may even be stated that there were basically no public transport facilities available for disabled persons in the area. The following are the specific principles and objectives that have to be achieved as part of the development of a strategy for addressing the needs of persons with disabilities:

- Proper information systems and communication structures (before and during the journey);
- Specialist transport services (e.g. dial-a-ride type services);
- The design of vehicles/rolling stock so as to allow for people with disabilities (special and normal vehicles);
- Special care during the design of public transport facilities, including ablution facilities;
- Ensuring access to public transport facilities and vehicles for the mobility impaired;
- Creating institutional and financial opportunities.

3.11 Public Transport Plan

3.11.1 Measures to Promote Public Transport

Historically, the provision of Public Transport was to provide the basic minimum. Subsidized bus service was designed to transport commuters from the 'townships' to the towns, in the apartheid regime. Homogeneously, most commuters' are captive to the bus and taxi modes of transportation in South Africa. Hence, there was no need to market public transport, to improve services, infrastructure, rolling stock, and facilities. Due to the history of socio-economic struggles for most people in the SDM, the level of service was not a priority, but the mere availability of service was important. The same group of people are now accustomed to the basic services and are not aware of a better and improved level of service due to the lack of knowledge. In the marketing of public transport in the SDM there is need for the development and implementation of a Passenger Charter, constant Market Research (Customer Care and Passenger Information), and the development of an aesthetic theme for public transport facilities where people identify with and take ownership of public transportation. A major focus in promoting public transport is primarily for road based public transport.

3.11.2 The Needs of Persons with Disabilities

Based on the information obtained from the Sekhukhune District CPTR the current public transport system does not seem to be user- friendly for disabled persons. The general lack of public transport infrastructure in the area seemed to be the main reason for this problem. In essence, there were no public transport facilities available for disabled persons in the area.

3.11.3 The Needs of Learners, Students, and Elderly

The current bus subsidies budget makes little provision for learner transport. Subsidized buses served mainly peak hour commuters and offer limited off-peak services to learners, students, and the elderly. Students and learners were a significant number in the morning peak periods. In the SDM, students and the elderly did not even qualify for concession fares, and pay the full adult fare at present leaner transport was available in some of the local municipalities in the SDM area. Where there was no learner transport – learners travelled on foot or by public transport, private transport, and private school buses or privately arranged special transport.

The average household income in the SDM was R2500. The results from the Report on the Optimization of Subsidies 2002 by the DOT, revealed the average income spent on transport was 7% (less than the proposed maximum of 10%). However, if one or two learners per household travel by bus, then the household spending on transport is significant.

3.11.4 Modal Integration, Infrastructure, and Facilities

In general, FTLM lack public transport facilities and the existing public transport

facilities were in a poor condition due to the lack of monitoring and maintenance. Survey results and strategic documents revealed bus and taxi as the two main modes of public transport in the SDM. Intuitively, bus and taxi compete for passengers especially in the peak periods. However, it is perceived that there is a specific market for each mode.

The SDM is geographically well covered by bus and taxi routes, but the pavement conditions of the public transport routes were in a poor condition. (The pavement continue to deteriorate rapidly due to the recent exponential increase in heavy vehicles from the mines.)

3.12 Conclusion: Road Infrastructure, Municipal Road Network

The Municipal Road Network for Fetakgomo- Tubatse Local Municipality captured the following information:

- Route number
- Length of road
- Road Network Type

In essence, though a Municipal Road Network assignment has been prescribed in this project scope – it should be understood that it is inclusive of any National and Provincial roads running through and within the area of jurisdiction of FTLM. The Road and Stormwater Master Plan for FTLM (2019) findings outlined FTLM road network as shown below.

Road Network Owner	Rural Principal Arterial (R1)	Rural Major Arterial (R2)	Rural Minor Arterial	Rural Collector as well as Rural & Urban Local Roads (R4, R5 & U5)	Grand Total (Kms)
National	0.00	0.00	294.34	0.00	294.34
Provincial	0.00	0.00	222.83	253.63	476.45
Municipality	0.00	0.00	259.53	4078.06	4337.59
Private	0.00	0.00	0.00	360.83	360.83
Grand Total	0.00	0.00	776.70	4692.51	5469.21

Table 3.18: FTLM Road Network

Municipal roads fall under ownership of the municipality – responsible for municipal roads and streets within its jurisdiction thses exclude roads owned by SANRAL, Province, District Municipality and Private Roads.

Aforementioned Master Plan further indicates that of the 5469.21km of municipal road network 4178.56km are gravel and only 156.93km roads are surfaced. This translates to 10.90% of the network being surfaced and the rest of the nework 89.10% being gravel. The extent and condition of this municipal roads breakdown is as presented below.

Municipal roads fall under ownership of the municipality – responsible for municipal roads and streets within its jurisdiction thses exclude

Items	Lengths Conditions				
	Very Poor	Poor	Fair	Good	Total Lengths (Kms)
Surfaced	18.71	28.07	74.84	18.71	155.93
Gravel	130.64	2794.70	1211.35	33.42	4178.56
Overal	149.35	2822.77	1286.19	52.13	4337.59

Table 3.19: Extent and condition municipal roads

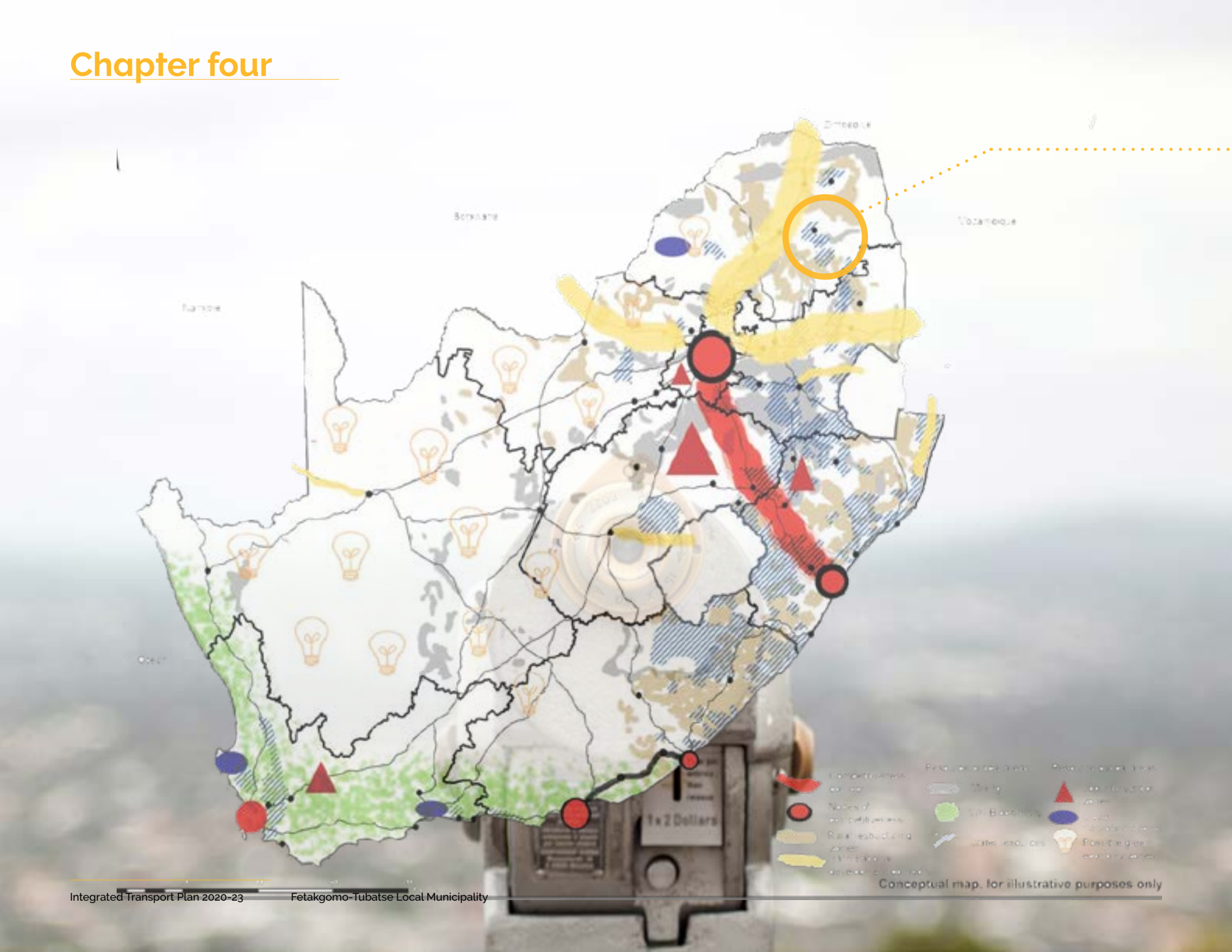
The current and the medium term municipal, provincial and national budget allocations for maintenance and upgrading of roads should be ascertained. Indication should also be made of the budget needed to improve the roads surface to an acceptable level of riding quality (see Annexure C). The Service Provider is also expected to indicate the priority routes for upgrading and maintenance (see Annexure D).

3.12.1 Traffic volumes and attraction points

- The mining activities along Road R37 and the villages located along this road generate high volumes of public transport on this route. It was therefore recommended in the Local Economic Development report that the widening and rehabilitation of R37 should be prioritized.
- Dilokong Corridor that is defined as an area stretching from Polokwane in the north to Burgersfort in the south with Road R37 forming the spine of the corridor. Along this corridor (R37/Dikolong) is a substantial number of rural villages and platinum and chrome mines resulting in a high number of public transport vehicles travelling in the area. A greater number of vehicle trips are expected as a result of increased mining activities. Road R37 is of national, provincial and local importance.
- R36 – Ohrigstad is small urban area, predominantly a service centre, which is located on the eastern edge of the local municipal area. It is mostly affected by the R36 and traffic moving through the area from Lydenburg in the south to places such as Hoedspruit, Blyde River or Phalaborwa in the north.

Road capacity – *overall, the road capacity is higher than demand in FTLM. However, in Burgersfort the road capacity (specifically R37) is lower than demand resulting in an average driving speed at morning and afternoon peak times of about 29 and 26 km/hr respectively, which is high compared to other similar cities in the world. There are also few locations in which traffic slows down significantly. It was observed and found out that road and intersection capacity was affected by lack of approach lanes, lack of free left turn lanes, poor or outdated signal programs, and unregulated parking in the city Centre. The traffic in the city centre varies a lot during weekdays. Friday appears to be the most trafficked day. Furthermore, the last working day at the end of a month is* the *peak day as many people come to the city centre to withdraw their monthly salary from ATMs and do shopping and other payments*

Chapter four



4 SPATIAL DEVELOPMENT FRAMEWORK

4.1 Introduction

The purpose of this chapter is to give an overview of the spatial considerations from an urban planning perspective of land use policies and plans that should be taken into consideration as part of this ITP. This is as contained and outlined in the Fetakgomo-Tubatse Local Municipality Spatial Development Framework 2020.

The SDF is relevant in this study as the future development proposals or spatial considerations may have the influence in transportation planning and system. This is critical as the SDF is an integral component of the IDP and would reflects, inter alia geographically, the municipality's strategy for delivering infrastructure and services in a sustainable and cost-effective manner. In the same manner, transport and travel are essential and costly components of life for individuals, households, business and government endured travelling from one place to another. This means that transport efficiency is an important consideration in the development and updating of the SDF vice versa. Furthermore, the Municipal Spatial Development Framework (SDF) supports and informs public and private investment decisions that affect the spatial form of the municipality. It establishes a framework that includes a spatial vision, policy parameters and development priorities for FTLM.

Having established the interdependency between land use and transport systems – Fetakgomo- Tubatse Local Municipality Spatial Development Framework is aligned with Sekhukhune District Municipality Spatial Development Framework and Limpopo Province Spatial Development Framework and the following are considered:

- Broad land use in FTLM;
- Future development proposals of the FTLM that will have an influence on the transportation system;
- Important aspects of the Fetakgomo-Tubatse Spatial Development Framework that should be taken note of as part of this ITP; and
- Criteria to identify (land use and transportation planning integration) gaps within the FTLM SDF.

4.2 The Spatial Development Framework

The purpose of this section is to extract the most relevant information from the FTLM SDF to show the development pattern, future growth direction and land use proposals in the FTLM that may have an impact on the ITP proposals.

4.2.1 The Spatial Development Concept

The Sekhukhune District Municipality spatial development objectives/proposed development principles outlay the foundation for the FTLM SDF. Therefore, SDM proposed the following spatial principles:

- To actively protect, enhance and manage the natural environment resources in the municipality in order to ensure a sustainable equilibrium between the mining, tourism and agricultural industries in the area
- To optimally capitalize on the strategic location of the district by way of strengthening of internal and external linkages within provincial and regional context
- To utilize the natural environmental and cultural historic features in the district by way of strengthening of internal and external linkages within provincial and regional context
- To maximally utilize the mining potential in the district by way of the development of Dilokong Corridor
- To promote commercial farming and food production along the Olifants River and Steelpoort River drainage systems in the District
- To facilitate small-scale and subsistence farming activities throughout the remainder part of the municipal area
- To promote industrial/commercial development in the District with specific emphasis on Agri-processing in the agricultural belt (Groblersdal), and mining/ore-processing in the mining belt (minerals beneficiation in the Special Economic Zone: SEZ (Tubatse) and agricultural belt to one another, and to the other markets of Gauteng Province along the Moloto Corridor
- To prioritize district roads forming part of the Dilokong and Phalaborwa Corridors
- To supplement the District east-west corridor by way of three functional north south corridors, N11 – Agriculture, Commercial; R583 – Institutional, Residential; R33 – Mining
- To consolidate human settlement projects in sustainable Priority Housing Development Areas at the identified urban and rural nodes.
- To ensure equitable access to social infrastructure and to promote Local Economic Development (LED) by way of an evenly distributed range of multi-purpose community centers to be established throughout the district
- To consolidate the urban structure of the district around the highest order centers by infill development and densification in strategic development areas
- To establish a functional hierarchy of towns and settlements in the district based on the regional function and spatial distribution of these centers

The FTLM desired sustainable spatial form and principles as contained in the FTLM SDF 2020 is summarized in the following spatial priorities:

(a) To promote integrated human settlements and agrarian reform

(b) To facilitate for basic services delivery and infrastructural development / investment
(c) To create an environment that promotes growth, development thereby facilitating job creation and inequality poverty

These priorities and objectives of particular importance to this project and that will have an impact on the spatial urban form are among Key Performance Areas (KPA) of FTLM as outlined below:

1 KPA1 – Spatial rationale: the objective: to promote integrated human settlements and agrarian reform (Output 4):

- Engagement of key stakeholders to assist in the speedy access of strategic located land parcels and provision of bulk services (e.g. traditional leaders, Department of Rural Development and Land Reform (DRDLR), etc.);
- Identification and acquiring of strategic located land in the municipality. Conceptualisation of development plans and establishment of a township/ demarcation of sites;
- Development of land invasion and response strategy;
- Finalisation of draft municipal SPLUMA by-law and enforcement thereof.
- Development and implementation of Wall to Wall Land Use Scheme;
- Development and implementation of municipal Spatial Development Framework;
- Support the development and implementation of the municipal corridor plans
- Establishment of transport planning unit and development and implementation of integrated transport plan;
- Development of by-pass route (Western Ring Road)
- Capacitation of housing Unit;
- Finalisation of housing accreditation,
- Development of Housing Sector Plan
- Formalisation or upgrading of informal settlements;
- Undertake feasibility study to ascertain the options of upgrading or relocation;
- Development of CBD boundary Development and implementation of densification policy

2 KPA 3: Basic service delivery and infrastructure development: the objective: To facilitate for improved service delivery and infrastructural development/investment (output 2):

- Promote a compact urban structure through urban infill and densification – the objective being settlements clusters will support effective service delivery;
- Improve integration between social amenities, economic opportunities and places of residence; and
- Optimize the existing and intended infrastructure to increase residential densities and connectivity in selected focus areas.

3 KPA 4: Local Economic Development: the Objective: to create an environment that promotes growth, development thereby facilitating job creation and inequality poverty (output 3):

- Identify and facilitate the transformation of Praktiseer, Strydskraal, Ohrigstad and Penge area into an Agricultural corridors;
- To create a strong east-west movement/development corridor in the SDM functionally linking the tourism precincts, mining belt and agricultural belt to one another, and to the markets of the Gauteng Province along the Moloto Corridor.

4.3 Existing and intended transport and urban development corridors and nodes

Development corridors are broadly defined urban areas of high- intensity (i.e. dense and diverse) nodal or 'strip' development focused around (a combination of) high-capacity road and bus/taxi routes in this study. They are characterized by a dynamic, mutually supporting relationship between land use and the movement system.

Development corridors are generally supported by a hierarchy of transport services that function as an integrated system to facilitate ease of movement for private and public transport users. However, the routes may serve different functions, with some routes combining route functionality in terms of accessibility and mobility. The concentration of intense bands of high-intensity urban development reduces overall trip lengths and improves access to opportunities, offering a means of conveniently integrating communities with service provision, and fulfilling a range of economic and social needs.

4.3.1 Status Quo

The major roads either allow formation of nodes or settlements at certain appropriate points along the road which become an anchor of spatial development agglomeration, e.g. Burgersfort, Ohrigstad and Steelpoort or smaller settlements such as Kgautswana, Alverton, Penge, etc. or a continuous band of spatial development along a longer road section, e.g. settlements between Mecklenburg and Driekop and Burgersfort or along the Ngwaabe Corridor. FTLM roads are in deteriorating state – the general condition of the entire SDM roads – severely damaged by potholes, cracks, and rutting. The most damaged roads are the following:

- R33 between Groblersdal and Stoffberg;
- R555 between Stoffberg and Roossenekal;
- R579 between Nebo and Soffberg; and

- R25 between Dennilton and Groblersdal.

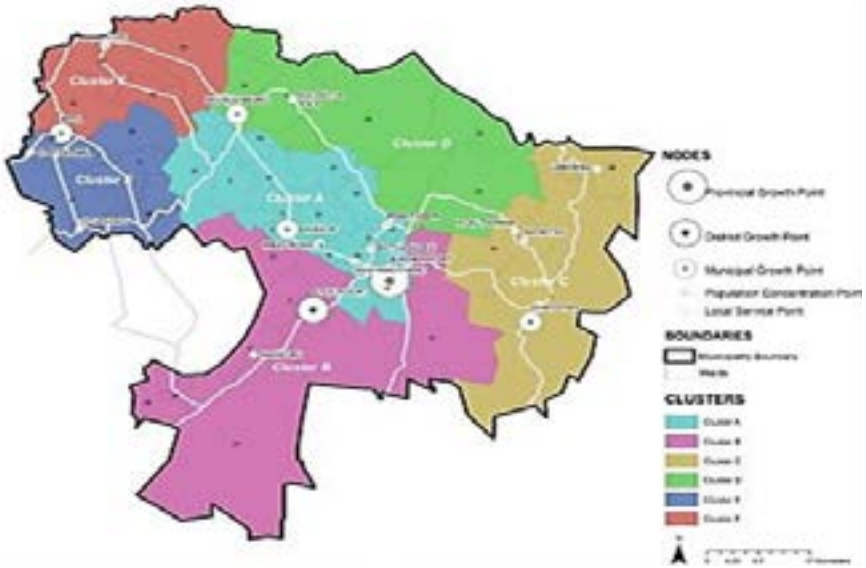
4.3.2 Existing Nodes

Based on the development trends in the FTLM, the FTLM SDF (2020) identified the settlement hierarchy as follows:

Order	Nodes	Settlements
First Order	Provincial Growth Point	Burgersfort
	District Growth Point	Steelpoort
	Municipal Growth Point	Ohrigstad, Driekop, Mecklenburg, Apel
Second Order	Population Concentration Points (PCPs)	RibaCross/Mashamothane, Bothashoek, Praktiseer, Atok
Third Order	Local Service Points (LSPs)	Kgautswana, Mampuru and extension, Malokela A and B, Leboeng, Mphanama
Fourth Order	Village Services Points	Steelpoortdrift Apiesdoorndraai/Dresden

Table 4.1: FTLM Settlement Hierarchy

The current settlement cluster in FTLM are as illustrated by Map 4.1 below.



Map 4.1: Settlements Clusters in FTLM **Source: FTLM SDF 2020**

4.3.3 Existing corridors

The main transport routes within the municipality as identified and documented in FTLM SDF 2020 are divided into the hierarchy of Primary, Secondary and Tertiary corridors as shown below.

Order	Corridor	Description
Primary	R37 (Dilokong Corridor)	The primary corridor (R37) runs through the municipal area in a North-South direction, connects Burgersfort with Polokwane and Lydenburg.
Secondary	R555 Regional Route R36 Provincial Route	The secondary corridors traversing the municipal area is the R555 Regional Route (connecting Steelpoort before crossing the R37 and ends at an intersection with the R36 Route at Ohrigstad.) and the R36 Provincial route (traversing the municipality in a North-South direction to the east of the municipal jurisdiction connecting Ohrigstad).
Tertiary	Ngwaabe Corridor D4190 D4200 D4252 D40454	The tertiary corridors consist of the following routes which form part of the central nerve system of the municipality: Ngwaabe Corridor to Jane Furse Pelangwe to Mabulela (D4190) Mphanama to Jane Furse to Apel (D4200) Mphanama to Mashabela (D4252) Road D40454 to Mphanama to Petseng to Ntswaneng to Ga-Kgwete

Table 4.2: Road hierarchy (Corridors)

Below are the most strategic element of the municipality with major corridors forming the central nerve system of the municipality along which major spatial activities as identified by national, provincial and local plans / policies / strategies / programmes.

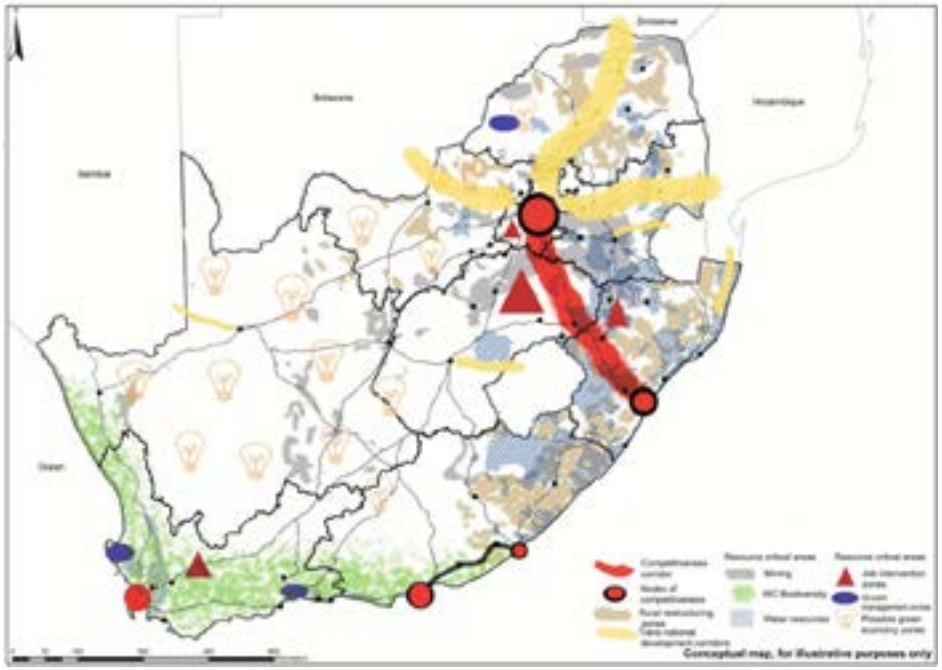
National level

The National Spatial Development Framework is strengthening the relationship between land use and transport planning. This scope of work identifies and includes the following corridors in FTLM at the national level:

- East-West Corridor Waterberg/Burgersfort Mining belt;
- R37 linking N1 from Lephalale to Burgersfort via Lydenburg to the N4

corridor and the Maputo harbour to export platinum and chrome;

- N1 from Western Cape to Musina, north of Limpopo Polokwane which is in close proximity to the Burgersfort Platinum Mining, covering Free State and Gauteng;
- R37 through Burgersfort to Lydenburg and R555 towards Middelburg.



Provincial level

Provincial Growth Development Strategy encompasses categorisation, classification and development of corridors as one of its principal strategies to concentrate economic activities within a defined spatial area. Corridors identified in FTLM are:

- Dilokong Corridor – FTLM, Tubatse to be specific forms part of the Dilokong Corridor, which is a top priority project for the provincial government
- Jane Furse Corridor
- Burgersfort Stoffberg Corridor

Municipality level

The corridors as identified and endorsed by FTLM as central nerve system and/or artery connecting municipality at various nodes.

Burgersfort:

- R37 (connecting Burgersfort with Polokwane and Lydenburg), and
- R555 (connecting Burgersfort with Steelpoort).

These two corridors are extremely important network spines in the municipality.

Steelpoort:

- R555 link to the N4 via Belfast is the quickest route to Gauteng which made Steelpoort an ideal site for the Samancor smelter,
- The junction with the link road to the R37 at Bogalatladi/Mooihoek provides access to the mines in the northern sections of the corridor.

Atok

- The Dilokong Corridor encompasses the Atok node and other important growth nodes within the area

Leboeng

- The R36 (Secondary Corridor) - Panorama Route cuts through the node and plays an important part in promoting tourism in the node.

Malokela

- The Malokela node forms part of the proposed local service points identified as a third order node in the FTLM.
- The D4140 road, also identified as a tertiary corridor in the municipality, connects the node with the R37 (Primary Corridor).

Steelpoortdrift

- The Steelpoortdrift node is located along the R555 (secondary corridor) and the tertiary corridor
- The tertiary corridor connects the Steelpoortdrift node with Jane Furse and other key settlements within the FTLM.

Manoke/Apiesdoorndraai

- The node is easily accessible via the R555 (secondary corridor) towards the south (connecting the node with Burgersfort) and from Praktiseer to the north
- The railway also runs through the southern part of the node, which can be utilised in the near future for passenger rail.

4.3.1.1 Description and the use of major transport corridors

As aforementioned, the major roads that traverse the FTLM area include the R555, R37 and R36. Located along these major roads are the urban areas of the FTLM,

namely Steelpoort, Burgersfort and Ohrigstad, as well as some smaller areas including Mooihoek and Bothashoek. All these areas, except for Ohrigstad, are grouped together near the intersection of the R555 and R37, which is roughly centrally located in the region.

Ohrigstad is small urban area, predominantly a service centre, which is located on the eastern edge of the local municipal area. It is mostly affected by the R36 and traffic moving through the area from Lydenburg in the south to places such as Hoedspruit, Blyde River or Phalaborwa in the north.

Road R37 forms part of the Dilokong Corridor that is defined as an area stretching from Polokwane in the north to Burgersfort in the south with Road R37 forming the spine of the corridor. There are numerous rural villages and a number of platinum and chrome mines along Road R37. This situation implies a high number of public transport vehicles travelling in the area. A greater number of vehicle trips are expected as a result of increased mining activities. Road R37 is of national, provincial and local importance.

4.3.4 Spatial Proposals

The spatial proposal outline the spatial requirements of the entire municipality. The growth direction of the municipality impact the spatial structure of the municipality and influence movement patterns and/or the entire transportation system. Map 4.2 below growth direction has a direct impact on transportation as it has to respond to this spatial dynamic.

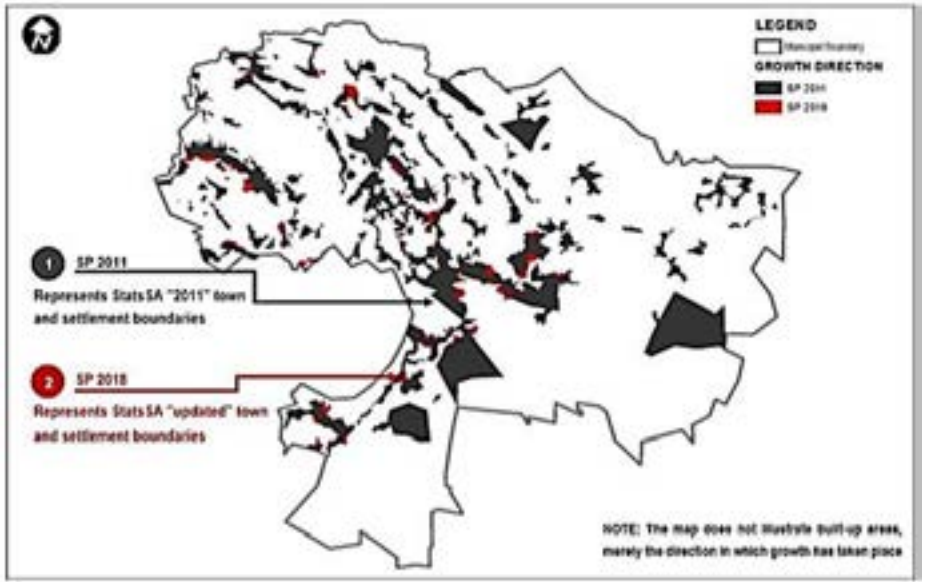
The transport corridors form part of the spatial proposals, these in FTLM as outlined in the SDF 2020 include the following proposals:

National proposals

- Upgrade R37 linking N1 from Lephalale to Burgersfort via Lydenburg to the N4 corridor and the Maputo harbour to export platinum and chrome.

Provincial proposals

- The Limpopo Provincial Government has identified FTLM as growth points for co-ordinated and high-priority development
- The Executive Council (EXCO) developed this concept further by directing immediate attention to Lephalale, Tubatse and the Musina-Makhado corridor
- Public housing and infrastructure development programmes will be prioritised in these places to reveal development potential and opportunities for job creation they own
- NATMAP 2050 for Limpopo, which aims at aligning the development of growth centres within rural areas (land use) with transportation



Map 4.2: FTLM Growth Direction

- Burgersfort platinum mining belt to be made more accessible to the Maputo harbour, to allow the export of chrome and platinum. This can be achieved by upgrading the R37 link between Burgersfort and Lydenburg to the N4 corridor.
- Link Burgersfort and Jane Furse to Tshwane along the Moloto corridor using alternative modes of transport. This can be achieved by extending the Moloto corridor from Moutse to link to Jane Furse and Burgersfort.

District proposal

To ensure continued economic growth, the District has prioritised the stretches of road forming part of the proposed Dilokong and Phalaborwa corridors which will fall within the boundaries of the district. These include;

- Polokwane to Burgersfort (P33/1 and P32/2) via Mefefe
- Flag Boshielo Dam through Lebowakgomo and Mafefe, linking the district with the Phalaborwa and Kruger National Park areas
- Chueniespoort via Boyne to Mankweng
- Ohrigstad via the JG Strijdom Tunnel (R36)
- Burgersfort to Oaks (P181/1).

Municipal proposals

- R37 corridor should include non-motorized transport (cycle lanes), public transport service stops, and a treed boulevard (Marula trees) as part of the main street network upgrading within Burgersfort;
- Part of addressing traffic congestion, a western and eastern ring road is proposed;
- This will ease traffic from the main R37 corridor
- The R37 and R555 should be maintained in a proper manner to give efficient access to and from Burgersfort
- D4190 and D4250 are major mobility routes and major public routes, which have been identified as major hazard for pedestrians with few facilities available for pedestrians to safely cross these roads
- The gravel section of the D4190 that links Apel with the R37 is poorly maintained and needs to be tarred to provide effective access to the Dilokong corridor which would be advantageous in exposing the economic potential of the areas
- To realise long-term sustainability for Dilokong the best sustainable option should be continuity functioning as a single linear 'social city'
- A social city has a number of smaller settlements linked together by a high-speed transport network and IT systems, surrounded by high-quality landscapes and agriculture thus enjoying the benefits of small and large settlements
- The transport system in Dilokong corridor is largely linear – the social city model suggests that the R37 should operate as a multimodal transport and urban development corridor
- Effective transport functionality will be an important component to the corridor's long-term sustainable success
- In order to translate the social city concept in Dilokong corridor the main intersections along the R37 becoming social facility and business nodes in order to enable business and its needs for visual exposure to passing traffic
- A linear pattern has proven to be the best configuration for this, especially to promote inclusive access for start-ups
- Mecklenburg forms part of the Dilokong corridor, it is vital that tourism is promoted in the node – its culture and heritage and can be exploited to form part of a tourism strategy
- Business activities should be strengthened along the primary Corridor (R37)
- Proposed tarring of the D4190 road between the Atok and Apel nodal clusters to create development opportunities, especially a new site for formal township establishment for the Atok cluster
- The lower order corridors including the D4180 and the main road through Mphanama are gravel roads which serve a critical settlement integration function. Treed boulevard (Marula trees) is proposed along the main corridors within the node.
- The R36 should be maintained as the road plays a strategic role in the municipality
- Panorama Route cuts through the node and plays an important part in promoting tourism in the node
- Tourist attractions such as the echo caves, waterfalls and J.G. Strijdom tunnel is in close proximity to the node.

4.3.5 Special Economic Zones Programme Spatial Considerations

Special Economic Zones (SEZs) are geographically designated areas set aside for specifically targeted economic activities. One of the critical tools for accelerating the country's industrial development agenda is the new Special Economic Zone (SEZ) Programme, which was mandated by the SEZ Act, proclaimed in 9 February 2016. In support of the National Development Plan's initiatives of fostering the creation of employment and economic growth through industrialisation, The Limpopo Economic Development Agency (LEDA) focused on the establishment of Special Economic Zones (SEZs) in its jurisdiction to promote growth and investment:

1 Musina Makhado SEZ

- Tubatse SEZ – is located in the eastern limb of the Bushveld Igneous Complex in Steelpoort. Tubatse SEZ is based on the availability of platinum group minerals along the Dilokong Corridor which cuts through the region. The main economic activity in Tubatse SEZ is the hydrogen fuel cell initiative driven by AMPLATS
- Tubatse SEZ is based on the availability of platinum group minerals along the Dilokong Corridor which cuts through the region
- There is economic potential within mining activity and downstream beneficiation activities around Northern (part of the western limb), and Mokopane and Tubatse along the Dilokong Corridor (eastern limb)
- Tubatse/Dilokong Corridor also hosts chrome reserves
- Burgersfort has been identified as the ideal location for an Agri-Park.

4.4 Criteria for Land Use and Transportation Integration

Transportation infrastructure is vitally important for the economic growth of cities. A safe and efficient public transport system that

connects people, places and businesses in a cost effective manner will give people the opportunity to improve their standard and quality of living. It is therefore important to make sure that land use and transportation are integrated as much as possible in order to achieve the above. On this account, best practices and case study is adopted to inform the criteria for land use and transportation integration for FTLM.

The following case study of India provides examples of existing strategies/policies

which encourage the integration of land use with transport planning to promote more sustainable transport patterns.

4.4.1 Setting the scene: outlining the primary objective of spatial plans and transportation plans

In order to formulate and/or set criteria that is to promote integration between land use and transportation it is imperative to understand spatial plans and transportation plans to determine/measure the ITP level of integration.

The spatial plans primary objective is to provide a framework for accommodating anticipated growth including basic infrastructure while protecting/preserving natural resources. The output also defines, though in a limited way, the future transport network and nodes (and other facilities) without explicit regard for interactions between various land uses/activity sub systems.

The transportation plans or transportation studies are generally undertaken by cities when transportation problems become a politically-driven priority rather than a continuous process as in land use planning. Thus, transport plans and spatial plans are taken up as exercises independent of each other. Furthermore, transport plans are usually based more on modelling results (often with a preordained outcome, e.g., plan to build more elevated highway flyovers and ring roads and a metro) than on achieving a vision that includes land use and transport. Thus, planning becomes an engineering exercise, identifying spot solutions with a demand follow approach. Above definitions and characteristics point out what has been missing link in most ITPs. That is the spatial and transport planning were (are) not integrated and the transport planning follows a reactive approach of providing for solutions for transport problem manifestations like congestion, delays, pollution etc. Through these lenses a deduced understanding is that transport plans consider spatial plan proposals as given instead of analysing the possible effects of a particular development pattern. There has been an increased focus on integrating land use and transport planning, primarily to assist in sustaining or improving mobility and access while reducing private vehicle travel such as is the case of India.

4.4.2 The case of India – the best practice

A point of departure is furnishing city planners with tools to undertake integrated planning. The following concepts of urban development and transport planning, when planned in an integrated fashion, will enable execution of efficient land use transport integration.

Tools: urban development and transport planning concepts	Approach	Output
Density (Intensity of development – concentration of activities and people)	Higher densities.	More people to reside in a smaller area Reduces demand and utilization of resources for infrastructure development for the same.
	Dense urban fabric	Allows Cities to remain smaller in size Reduces travel distances within the urban settlement
Land use Mix	A good mix of land use within an urban fabric	-Will ensure self- contained neighbourhoods and a city.
	Offer a variety of facilities like jobs,education entertainment etc are available within walking distances or accessible by other non-motorised modes, from the place of residence.	Reduce the need for travel through motorised modes
	Major city level activities and land uses need to be clubbed at certain nodal points within a city	Will ensure that one can engage in multiple activities at a single urban node
Strategic Network	Link various activity nodes with a good network of roads and an efficient mass transit system	Will enhance accessibility within the city

	Linking all major activity nodes with mass transit	Will ensure more public transit patronage, a more sustainable mode of travel
Multimodal Transit	Link various modes of transport with each other in an efficient manner	Will enhance mobility of a city Will include physical integration of the various modes in a manner that there is minimum distance to walk and minimum time taken to transfer from one mode to the other.
Development Oriented Transit and Transit Oriented Development (TOD and DOT)	While transit systems are strategically aligned to connect major development /activity nodes of a city	There will exist a reverse reaction of; development following mass transit systems.
	TOD and DOT	Will ensures land use transport integration in cities

Table 4.1: City planners' tools for land use transport integration

The key elements of integration

The integration of land use with transportation systems has to happen at all scale/ levels of planning and through multiple intervention mechanisms. The most important elements of land use transport integration to consider for ITP are listed below:

1) Enabling urban structure;
2) Complete network and complete streets;
3) Public transit and its strategic alignment;
4) Transit oriented development and value capture:
i. Along routes,
ii. Around transit interchanges;
5) Accessibility improvements in terms of local area plans (last mile connectivity);
6) Re-development & re-vitalization & Transit:
i. Inner city,
ii. Derelict areas,
iii. Slums;
7) Integrated multimodal transit interchanges

Apart from the above mentioned elements inter jurisdictional coordination is also important overarching aspect.

Strategic alignments

In most Indian cities, the provision of public transport is a post facto intervention once new growth areas have developed. Growth happening in areas where public transport has not been planned results in an increase in the number of trips made by private vehicles as well as an increase in trip lengths, eventually leading to greater traffic congestion, trip delays, higher travel costs and pollution.

In this regards it is important to have a strategic spatial plan for the sustainable growth of a city, this plan will sets out the spatial development priorities, both geographically and thematically, and which permits the production of a complementary strategic transport plan for the enhancement of the transport network, in a way that ensures transport capacity with the right accessibility and quality is provided just in time to support the various land-use developments. This alignment will also allow the timely extraction of value from respective developments to aid fund the transport improvements.

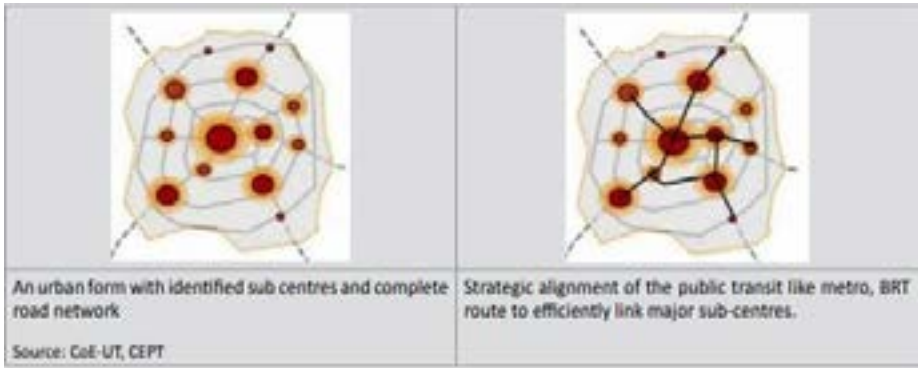


Figure 4.1: Strategic alignment along development zones/centres Source: (Ministry of Urban Development – Government of India & UNDP, 2016)

Recommendations for FTLM ITP

Existing low density developments along public transport corridors should first be densified before opening up new land for development. This would ensure efficient utilization of available public transport service, at the same time it would control unnecessary city sprawl.

The new developments should be proposed along the existing public transport corridor to promote use of public transport service and to avoid scattered development. The alignment of the public transit system is hence an important component to ensure efficient movement in the city. The idea is to provide for a network of transit in the city rather than just corridors with flexible route operations. The transit should be aligned so as to connect the major activity centres in the city.

4.4 FTLM SDF effectiveness in encouraging and ensuring land use and transportation integration

It is recommended that FTLM SDF 2020 spatial guidelines should be analysed whether they support the ITP and encourage effective land use and transportation integration.

Table 4.2 below is set out to determine the compliance of the SDF to criteria as set out from the analysis of main themes of the spatial practices and framework understudy

	Criteria for Land Use and Transportation Integration	**Does the Spatial Framework Comply with the Criteria (Yes/No)**	**Comments**
Promote a more sustainable city	Clear identification of routes to be use by public transportation, as well as interventions to encourage/promote public transport routing.		
	Identification of inter-modal Facilities (existing and proposed).		
	Desired densities to make public transport viable.		
	Improve all modes of public transport (including non-motorised modes).		
Strive to achieve efficient cities	Promote public transport between nodes as identified in the Spatial Development Framework		
	Identify a clear road hierarchy and road function that will relate to the spatial pattern.		
	Identify future corridors for development as per the Spatial Development Framework.		
Improve accessibility to areas of opportunity	New infrastructure to connect the "poor" with economic centres.		
	Look at proposals to make use of existing infrastructure to improve accessibility where needed.		
Promote economic growth opportunities and business facilitation.	By improving transport modes to areas of import and export (airports/ harbours, etc.) linking these facilities to economic centres.		

Chapter five

5 TRANSPORT NEEDS ASSESSMENT

5.1 Introduction

This chapter focuses on the transport needs as identified by the Transport Register, Household Travel Survey 2013, General Household Survey 2018, and consultation with FTLM representatives, FTLM Planning and Development planners, FTLM Technical Services and Infrastructure Development, and survey and observations covering transport infrastructure and transport modes in the FTLM area. The needs assessment shows the present problems and needs that will be translated into projects for prioritization.

5.2 Transport Demand Needs

The science of Transport Economics dictates that the user needs are unlimited, while the resources to satisfy those needs are limited. This chapter attempts to identify the transport needs of transport users and such needs are assessed to ensure that the user is given a considerable latitude of rational choice and preference of the transport system. More often than not, transport problems of the present often seem so overwhelming that it seems pointless to talk about transport planning for the better future. However difficult, it is vital to look beyond the present circumstances and ensure that strategies are set in place to overcome current identified transport problems and issues.

5.2.1 IDP Informants

The FTLM IDP has not had Integrated Transport Plan before since the amalgamation of Fetakgomo Local Municipality and Greater Tubatse Local Municipality. Transport needs and issues are covered in its IDP and SDF. These two plans are not transportation planning focused and

surely they do not cover it comprehensively, hence a need for detailed ITP to address the gaps. This means that the municipality has superficial information with respect to Integrated Transport Planning (ITP). The Local Municipality needs over and above, an adequate technical capacity to manage the Local Integrated Transport Planning process. This is substantiated by the Draft 2018/19 IDP Budget for FTLM which points out that there is a critical need to build transport planning technical skills so as to manage transportation projects with a superlative degree of confidence.

5.2.2 Existing statutory planning informants

The National Land Transport Strategic Framework lists the needs of special categories of passengers and a need for non-motorised transport. At the provincial level transportation is escalated to the provincial budget 2019/20 which emphasised and reiterated provincial budget 2011/12 that job creation through road and transport infrastructure is indeed the order of the day. There is a critical need to provide adequate inter-modal facilities to ensure that the travelling public enjoys comfort and convenience throughout their travel value chain. Within the Sekhukhune District Municipality, the provision of inter-modal facility should be given the priority it disserves as it was part of the recommendations highlighted during the formulation of the Integrated Transport Plan in 2007.

5.2.2.1 National Household Survey General Transport Problems

As revealed by the National Household Survey (2013), the travelling public in Limpopo has elicited an array of problems related to their daily travel. Table 5.1 portrays general problems as perceived by transport users in Limpopo as well as the rest of South Africa

TRANSPORT RELATED PROBLEMS	% Problem s Limpopo	% Problem s RSA	COMMENTS
No trains available	0,3	1,2	Indeed trains are not available in LP
Trains are not reliable	0,1	1,2	General perception nowadays
Trains too far	0,1	0,8	Rail network far from residential area
No trains at specific times	0,1	0,6	No trains when needed
Trains too expensive	0,1	0,2	Expensive when not coordinated
No transport problems	17,1	13,5	Monitor satisfaction level
Poor conditions of roads	13,7	9.4	Identify roads that need maintenance
Rude drivers	1,8	4,0	Customer service training
Overload	3,3	3,5	Intensify regulatory control
Congestion	1,2	2,8	Introduce TDM Strategies
Crime	0,9	2,5	Initiate JOC Strategy
Toll fees	0,2	0,8	Create awareness of tolling

Parking	0,3	0,4	Introduce parking strategies
Other	0,5	1,2	Explore other issues

Table 5.1: General Problems

Based on Table 5.1 above, it is evident that although the majority of respondents (17.1%) in Limpopo and (13.5%) in the rest of the Republic of South Africa responded by saying that they encountered no transport problems, 13.7% had problems with the condition of the road infrastructure in Limpopo. The same problem declined to 9.4% country-wide. This indicates that on average Limpopo has a critical problem with regard to the poor conditions of the roads infrastructure. There is a critical need to provide adequate inter-modal facilities to ensure that the travelling public enjoys comfort and convenience throughout their travel value chain. Within the FTLM, the provision of inter-modal facilities should be given the priority it deserves as it is currently part of the recommendations highlighted in the National Expenditure Estimates (2015).

5.2.2.2 Dissatisfaction level with minibus taxi services in Limpopo

According to Table 5.2, respondents were given the opportunity to express their dissatisfaction level based on the user requirements as listed between 2003 and 2013. What appears outstanding dissatisfying factor is the condition of modal facilities and ablution amenities. This is not coming as a surprise because most of the amenities visited at the modal facilities in the Fetakgomo- Tubatse Local Municipal area were not in good condition.

Service attributes	2002	2013	Comments
Distance between modal/route and home	12,1	23,7	Increased dissatisfaction
Travel time by taxi	14,3	1,2	Decreased dissatisfaction
Security on the walk to / from the taxi rank	8,4	21,6	Increased dissatisfaction
Security at taxi ranks	7,8	19,4	Increased dissatisfaction
Security on the taxi	7,4	16,7	Increased dissatisfaction
The level of crowding in taxis	7,4	19,4	Increased dissatisfaction
Safety from accidents	7,5	23,9	Increased dissatisfaction
Frequency of taxi during peak period	9,5	20,0	Increased dissatisfaction
Frequency of taxi during off-peak period	9,2	21,8	Increased dissatisfaction
Waiting time for taxis	10,7	28,6	Increased dissatisfaction
Taxi fares	9,5	34,1	Increased dissatisfaction
Facilities at the ranks, e.g. toilets, offices	10,4	38,0	Increased dissatisfaction
Roadworthiness of taxis	8,1	25,1	Increased dissatisfaction
Behaviour of the taxi drivers towards passengers	7,9	20,2	Increased dissatisfaction
Taxi service overall	7,7	21,0	Increased dissatisfaction

Table 5.2: Dissatisfaction level with mini bus taxi services in Limpopo

5.2.2.3 User requirements as prioritized by users in Limpopo

According to Table 5.3, transport users rate the travel time and cost very high in Limpopo. At the same time they would like to have a mode of transport that is flexible with a high degree of safety, comfort and accessibility. The modal facilities should be secured with Time Tables displayed for the convenience of all transport users. The attitude of drivers towards transport commuters needs to improve.

USER REQUIREMEN	LIMPOPO	RSA	COMMENTS
Travel time	34	32,5	Need for Modal Integration Strategy
Travel cost	28,5	26,2	Need for Modal Integration Strategy
Flexibility	9,9	9,2	Need for Modal Integration Strategy

Safety from accidents	6,5	8,7	Need for frequent driver & vehicle test for
Comfort	6,2	5,9	Need for Modal Integration Strategy
Reliability	3,6	5,0	Need for Modal Integration Strategy
Distance from home to	5,2	4,3	Need for Modal Integration Strategy
Security from crime	1,1	2,4	Need for JOC/ Security Management Strategy
Drivers attitude	2,6	3,3	Need for Customer Services Training
Time table not available	1,2	0,6	Need for Modal Facility Management Strategy
Other	1,1	1,8	Need for Modal Integration Strategy
	100	100	

Table 5.3: User requirements as prioritized by users in Limpopo

5.2.2.4 Critical user requirements

The most critical user requirements that were prioritized in Limpopo are travel time, travel cost and flexibility as shown in Table 5.4 below. Of critical importance to take note of is that safety remains the first consideration in all the user requirements that should be advanced to every customer. For the travel time and cost to be combined and thereby creating flexibility in the transport system, there has to be a modal integration strategy. It therefore goes without saying that the FTLM should craft a modal integration strategy to ensure that the user requirements are complied with.

	Travel time	Travel cost	Flexibility
Limpopo	34,0	28,5	9,9
National	32,5	26,2	9,2

Table 5.4: User requirements as prioritized by users 2013

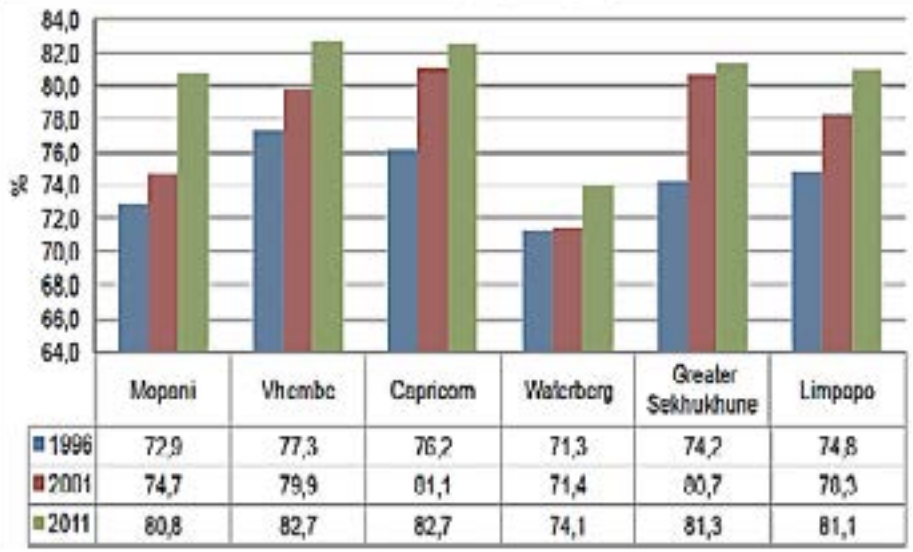


Figure 5.1: School attendance per District Municipality

Figure 5.1 depicts a positive trend of school attendance in Limpopo. Worth noting is that the Sekhukhune reflects the third in terms of school attendance rate in Limpopo. This remains a concern and it implies that the provision of learner transport could be inadequate to serve as an added motivational tool to enhance school attendance. A need for learner transport is therefore a strategic must within the Sekhukhune District Municipality and the FTLM in particular.

5.3 Transport Vision, Mission and Demand Need Objectives

5.3.1 Transport Vision

The Vision for the FTLM was outlined in Chapter 2 of this Integrated Transport Plan as

"A developed Platinum City for a sustainable human settlement"

5.3.2 Transport Mission

The reason for the FTLM existence is to promote:

- Accountable through active community participation;
- Economic advancement to fight poverty, inequality and unemployment;
- Render accessible, sustainable and affordable service;
- Municipal transformation and institutional development; and
- Sustainable livelihoods through environmental management

5.3.3 Transport Demand Needs Objectives

These objectives are derived from demand needs and address priority needs and act as measures to promote public transport as outlined below:

5.3.3.1 Public Transport Infrastructure

Objective 1: Develop guidelines for public transport facilities based on passenger demand taking into account the available infrastructure and considering both provincial and national guidelines for providing public transport facilities.

Objective 2: Plan, design and implement public transport infrastructure based on these guidelines. The provision of public transport infrastructure will be based on the passenger demand at the different public transport facilities.

5.3.3.2 Planning and Development

Objective 3: Identify and agree to the roles and responsibilities of all stakeholders with regard to infrastructure provision, funding, policy development, operation and maintenance.

Objective 4: Implement the DITP and ensure the integration and alignment with other statutory plans, land use planning and other relevant future developments.

Objective 5: Facilitate and ensure the implementation of the operating license strategy developed by SDM to ensure a safe, reliable, effective and efficient public transport service.

Objective 6: Agree on the scope and extent of additional studies required while improving and implementing the LITP.

Objective 7: Ensure that modal and land use integration takes place in the planning of public transport services and infrastructure.

Objective 8: Investigate the needs of special categories passengers and non-motorised transport options to make sure that their needs are also addressed.

5.3.3.3 Road Transport Infrastructure

Improve the accessibility to the public transport service by investing in road infrastructure especially in rural and deep rural areas.

Objective 9: Conduct corridor studies to provide detail information on the current conditions of infrastructure and future demand for transport, public transport and freight.

Objective 10: Ensure continuous upgrading and maintenance of all roads and public transport infrastructure to increase the accessibility to public transport service for all users in the Sekhukhune District Municipality.

5.3.3.4 Public Transport Demand, Safety and Education

Ensure safe, secure, reliable, affordable and sustainable public transport service based on public transport demand.

Objective 11: Promote proactive law enforcement at provincial and local government level to reduce illegal operations and improve road safety to all road users. Encourage the upgrading and maintenance of public transport vehicles.

Objective 12: Re-investigate road user education and develop a policy and strategy to restart this process not only for public transport operators, but also for the non-motorised, animal-drawn transport in particular. Such an initiative should be driven by the Limpopo Provincial Department of Roads and Transport and be implemented throughout the province.

5.4 Public Participation

In addition to the secondary data sourced from various sources, a series of workshops is undertaken with the following critical stakeholders:

- Limpopo Provincial Department of Roads and Transport;
- Sekhukhune District Municipality;
- Fetakgomo- Tubatse Local Municipality;
- Taxi industry associations;
- Bus industry association;
- Mining industry

5.4.1 Schedule of Public Participation meetings

This Chapter and mainly this section is work in progress – the schedule is to be agreed with the Client.

This part of the LITP must in essence be a description of the process followed to identify the upgrading and maintenance needs of all roads and public transport facilities for which the planning authority is responsible. This should include reference to any pavement management system (PMS) which may be employed by the authority, as well as any other surveys or processes of public participation aimed at identifying the needs of the community. The transport needs assessment should be based on the SDF for the area and must give adequate attention to:

- Measures to promote public transport;
- The needs of learners and persons with disabilities;
- Non-motorised transport; and
- Private transport.

5.4.2 Transport Needs derived from the Status Quo

The transport needs listed below are derived from the status quo analysis and strives to:

- Identify the different problem areas through the analysis of the Transport Register;
- Roads that are badly maintained resulting in potholes, dust, etc.;
- Public transport facilities in poor condition and lacking proper amenities, requiring maintenance and upgrading;
- Inadequate storm-water system resulting in flooding of facilities and properties; and
- No provision for non-motorised transport, resulting in unsafe travel.

5.4.3 Need for improved public transport facilities

The need for improved public transport facilities will, of course, have to be aligned with the provision of public transport services and the transport network on which they will operate.

- To identify mid-term objectives for each priority issue (this should be guided by the midterm objectives of the IDP) and then develop strategies for each priority issue.

Examples of objectives are:

- Planned programme of grading of gravel roads or resealing of paved roads to an acceptable standard at a certain date;
- Planned programme of construction of new roads to achieve an acceptable ratio of paved versus unpaved roads at a certain date;
- Planned programme for the upgrading of public transport facilities to an acceptable standard, e.g. paved surfaces, shelter against rain and sun, ablution facilities, etc., at a certain date; and
- Planned programme for the implementation of a NMT network at a certain date.)

5.4.4 Strategies to Achieve Stated Objectives

The strategies to achieve stated objectives may include:

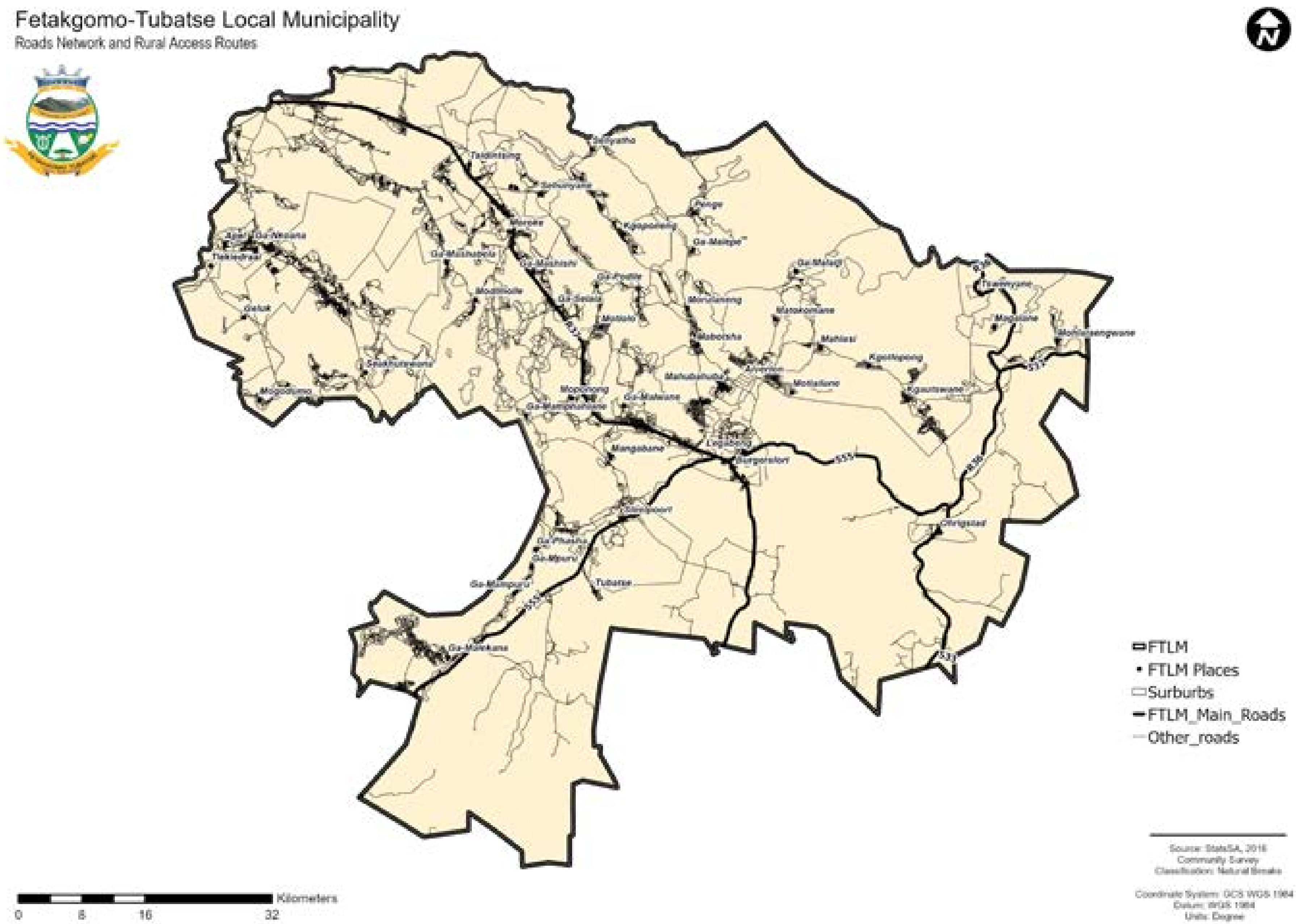
- Development of a pavement management system;
- Annual road maintenance and road construction contracts;
- Departmental maintenance/construction teams;
- Regular surveys and documentation of the condition of transport facilities; and
- Maintenance contracts for public transport facilities.

5.5 Summary

The last and important step is the identification of projects from the status quo inventory; grouped in relation to each of the selected strategies. It should be borne in mind that both planning and implementation projects need to be considered. The initial list of projects can now be subjected to public and political scrutiny to ensure that the actual needs of the community are being addressed.

The available budget for the improvement of the transport system is nearly always insufficient to fund all the identified projects and a process of project prioritization will have to be used to ensure that the available budget is spent in those areas where the greatest needs are. The involvement of politicians in the prioritization process is advisable to ensure political support for the final project lists.

This Chapter is work in progress and will be updated as and when a need arises during the public participation process.


Fetakgomo-Tubatse Local Municipality
Roads Network and Rural Access Routes
FTLM
FTLM Places
Surburbs
FTLM_Main_Roads
Other_roads
Kilometers
0
8
16
32
Source: StatsSA, 2016
Community Survey
Classification: Natural Breaks
Coordinate System: GCS WGS 1984
Datum: WGS 1984
Units: Degree

6 PUBLIC TRANSPORT OPERATION STRATEGY

6.1 Operating License Strategy

An operating license is defined in terms of section 50(2) of the National Land Transport Act, Act No.5 of 2009 as a document "authorizing the vehicle to which it relates, to operate more than one service or type of service". A strategy on the other hand is interpreted differently by different people and Mello (2011:127) defines it as "an Integrated, overarching concept of how the business will achieve its objectives". In the case of the FTLM, in dealing with an operating license strategy, the question would be, how would one go about in ensuring that operating licenses are issued to the right applicants or prospective operators at the right time? This brings about the intervention of Section 20(1) of the National Land Transport Act, Act No.5 of 2009 which prescribes the competencies of persons required to manage a Public Transport Regulator.

6.1.3 Purpose of Operating License Strategy

The primary purpose of an Operating License Strategy is to set out the Municipality's policies and strategies in relation to:

- The role of each mode for different areas, routes and corridors;
- The circumstances under which the operation of the preferred mode of public transport should be allowed;
- The number of operating licenses that should be allowed for each area or route;
- The adequacy of public transport facilities within the area; and
- The conditions which should be imposed in respect of operating licenses.

6.1.3 Issuing of an Operating License

Section 62(1) states that an Operating License may only be issued if the applicant:

- Has applied in terms of this Act and applicable provincial laws
- Has furnished a valid tax clearance certificate from the South African Revenue Service certifying that his, her or its tax affairs are in order.
- Has signed the statement to the effect that he or she will comply with labor laws in respect of drivers and other staff, as well as sectoral determinations of the Department of Labor.
- Has submitted a current roadworthy certificate, which was issued for the vehicle not earlier than the prescribed point in time, or a duly certified copy of such a certificate, as well as proof that the vehicle is properly licensed and has a national information system model number allocated to it.
- In the case of renewal, transfer or amendment, has returned the previous license issued for the same service to the entity issuing it.
- Has submitted proof of insurance cover as prescribed.
- Has submitted any other proof, information or document as prescribed or required by the relevant entity.

An operating license must contain the prescribed particulars, and the Minister may prescribe that a tag, electronic card or other device or equipment be issued with an operating license and kept in or on the vehicle, as well as an issuing fee for the license or such tag, card, device or equipment.

6.1.4 Application Process

An Operating License must only be issued on application made in terms of this Act by the National Public Transport Regulator, a Provincial Regulatory Entity or a Municipality to which the Operating License

function has been assigned, as the case may be, after considering all the factors mandated by the Act.

6.1.4.1 Application for new Operating Licenses

In the case of where an applicant desires to operate an Inter- Provincial Service or a Tourist Transport Service as depicted in Figure 6.1, such an applicant must apply to the National Public Transport Regulator for the necessary Operating License. In the case of where a person wishes to undertake an intra-provincial service taking place in the area of the municipality to which the operating license function has been assigned, or starting in the area of that municipality and also taking place in the area of another municipality, then an application must be lodged to the municipality so assigned with the responsibility of issuing Operating Licenses.

Where a transport plan shows a need for additional services, other than tourist transport services on a route or routes in its area, the municipality to which the Operating License has been assigned may invite applications for Operating Licenses to provide those services.

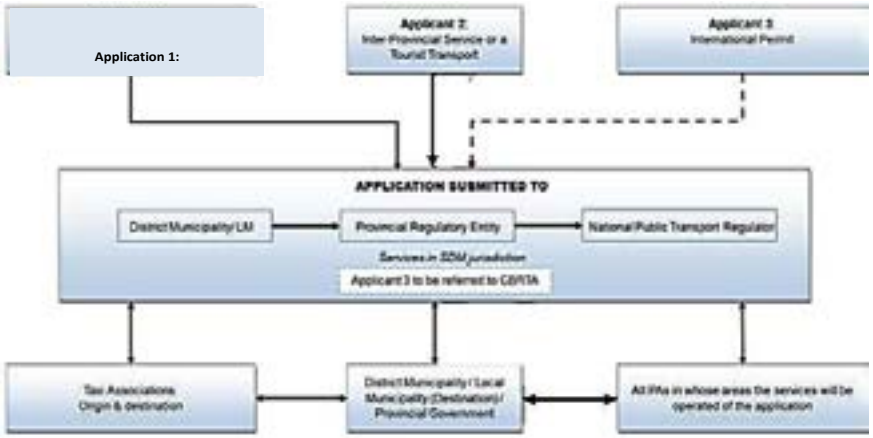


Figure 6.1: Application process

6.1.4.2 Cross Border Permit Application Process

In dealing with international permits, the Cross Border Road Transport Agency (CBRTA) features into the equation. An application for the conveyance of goods or passengers across the South African Borders must be directed to the Cross Border Regulatory Committee of the CBRTA. If more than one permit has to be issued in respect of the same vehicle, the holder of the permit must be the same person.

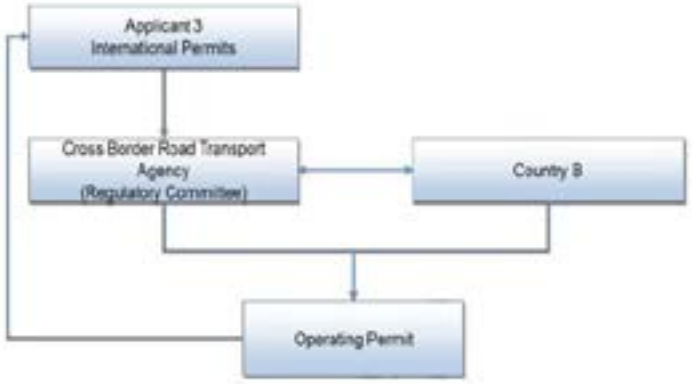


Figure 6.2: Cross Border Permit Application Process

6.1.4.2.1 Regulatory Committee

The Regulatory Committee must be furnished with the completed passenger lists as prescribed, in respect of the previous permits which were held by the applicant.

- The need for the particular service must be determined, taking into account the available transport facilities.
- Determine whether the applicant operates from the address furnished by him or her.
- Determine the ability of the applicant to provide the particular service.
- Determine whether it will be expedient in the public interest to grant him or her, a cross-border permit.

6.1.4.2.1 Consultation Process

The manner in which all stakeholders should be involved in the process of issuing a permit must be described. The public participation process must allow for adequate advertising in the provincial gazette, and allow existing operators adequate opportunity to make representations should they feel that their rights are being affected;

6.1.4.2.3 Temporary replacement of vehicle as applicable to Cross Border

In the event of a breakdown en-route, a driver must be allowed to complete the specific journey with another vehicle on the authority of the permit issued to the vehicle which had broken down. The driver must make a sworn declaration regarding the nature of the breakdown, and where the broken down vehicle can be inspected. The sworn declaration must be carried on the replacement vehicle.

The permit holder or the driver must allow any road transport inspector to inspect the

broken down vehicle at the place where the latter vehicle is.

6.1.4.2.4 Standard permit conditions as applicable to cross border operation

The following standard conditions apply to a permit:

- A permit shall be valid for the use of one vehicle at one time.
- A permit shall be used only by the authorized carrier to whom it is issued and shall not be transferrable.
- The original permit and passenger list shall be carried on the vehicle and, on demand, shall be shown to the appropriate Authority.
- A carrier of one contracting party shall not convey passengers between two points in the territory of other contracting party or between a point in the territory of the latter contracting party and a third State.
- Transport operations undertaken in terms of the authority of this permit shall be subject to the application of restrictions and control imposed under national laws and regulations on grounds of environmental protection, public health road traffic or of veterinary or pathological reasons or the levying of dues changeable by virtue of such laws and regulations of a contracting party.
- All vehicles used in terms of this permit shall be suitable and roadworthy for the transport or operations for which they are licensed.
- A certificate of roadworthiness of fitness issued in the territory of one contracting party shall be valid in the territory of the other contracting party. This shall not, however, prevent the checking of a vehicle's roadworthiness or fitness by the competent inspection authorities at any time.

6.1.4.3 Interaction between public transport and cross-border road transport

Section 75(1) of the National Land Transport Act, Act No.5 of 2009 states,

'Where on trips involving cross-border road transport, an operator both picks up and drops off passengers within the Republic, either on the outward or return journey, that operator must be in possession of the necessary operating license as required by this Act for the vehicle, in addition to any permit required by the Cross- Border Act.'

Section 75(2) states,

'No one may drop off passengers at or near an international border, where it is clear that such passengers intend to cross the border into another state, and no one may pick up passengers at a near such a border where it is clear that those passengers come from another state having crossed such border into the Republic, unless that person is the holder of the necessary permit required by the Cross-Border Act.'

Section 75(3) of the National Land Transport Act, Act No.5 of 2009 states,
'In any prosecution in terms of this Act, where an operator has picked up or dropped off passengers within two kilometers of any international border post, that operator will be presumed to be undertaking cross-border road transport, unless the operator proves the contrary in the prescribed manner'.

Section 75(4) of the National Land Transport Act N.5 of 2009, states,

…Where the regulatory committee defined in section 1 of the Cross- Border Act is considering an application for a permit where ranks or terminals in the Republic will be used, that committee must allow relevant planning authorities the opportunity in the prescribed manner, to comment on the use of those facilities.

6.1.5 Application for Railway Safety Permits

The National Railway Safety Regulator Act, Act No.16 of 2002 hereinafter referred to as the (NRSRA) requires the Railway Safety Regulator to determine the form, content and manner of submission of a Safety Management System Report. The Act requires all Railway Operators to apply for a safety permit which should be issued by a Railway Safety Regulator (RSR) after ensuring that all the requirements for the issuance are complied with. There are categories of operators for which Safety Permits may be issued and these are;

- Network Operator
- Train Operator
- Station Operator
- A combination of two or three of them

There are different types of Safety Permits which are required for different applications and these are;

- Temporary Safety Permit
- Construction Train Safety Permit
- Test and Commissioning Safety Permit
- Safety Permit (for normal operations)

6.1.6 All Applicants for Operating Licenses

All applicants for Operating Licenses are required in terms of the National Land Transport Act, Act No. 5 of 2009, to do the following:

- Produce valid Tax Clearance Certificate;
- Has furnished a valid tax clearance certificate from the South African Revenue Service certifying that his, her or its tax affairs are in order;
- Has signed the statement to the effect he or she or it will comply with labor laws in respect of drivers and other staff, as well as sectoral determinations of the Department of Labor;

- Has submitted a current roadworthy certificate, which was issued for the vehicle not earlier than the prescribed point in time, or a duly certified copy of such a certificate, as well as proof that the vehicle is properly licensed and has a National Information System Model number allocated to it;
- In the case of renewal, transfer or amendment, has returned the previous license issued for the same service to the entity issuing it;
- Has submitted proof of insurance cover as prescribed;
- Has submitted any other proof, information or document as prescribed or required by the relevant entity;
- An operating license must contain the prescribed particulars, and the Minister may prescribe that a tag, electronic card or other device or equipment must be issued with an operating license and kept in or on the vehicle, as well as an issuing fee for the license or such tag, card, device or equipment.

6.1.7 Standard Operating Procedures (SOP)

As a point of departure, the Association must identify a need and supported by the District Integrated Transport Plan processed data: i.e.

- Modal facility utilization information
- Route utilization statistics/frequency level of vehicles operating from a particular intermodal facility
- The static capacity and status of the intermodal facility

After having scrutinized the District Integrated Transport Plan, the Sekhukhune District Municipality, as a Type 2 Planning Authority, is empowered in terms of Section 55(2) which states, "The Planning Authority must in the prescribed format:

(a) Indicate whether there is a need for the service on the route or routes or in the area or areas in terms of its Integrated Transport Plan or not, and, if there is a need for such service, direct the National Public Transport Regulator or a Provincial Regulatory Entity to grant the Operating License and make any recommendations it considers fit regarding conditions to be attached to the Operating License, having due regard to its Integrated Transport Plan, and its Integrated Transport Plan is not yet finalized or is inadequate, it must take the decision based on due inquiries and investigations carried out by it and

(b) Submit such response to the National Public Transport Regulator or a Provincial Regulatory Entity, as the case may be within the prescribed period or the period stipulated in the notice.

6.1.7.1 Practical example

Let us assume that the Fetakgomo -Tubatse Local Municipality has been designated as a Type 3 Planning Authority to issue Operating Licenses. If a need arises at the FTLM to issue an operating license to operate minibus services from Fetakgomo-Tubatse Modal Facility to various destinations, the association operating from that particular modal facility must identify a need to do so. This should be confirmed by the Integrated Transport Plan Information showing the extent to which the intermodal facility is being utilized.

6.1.8 Operating licenses for public transport services provided for in transport plans

After having submitted an application to the National Public Transport Regulator or Provincial Regulatory Entity, it is for the said entity to consider any of the submitted applications for the granting, renewal, amendment or transfer of an Operating License, other than a tourist transport service or charter service, and other than a contracted service. It must by notice in the prescribed manner inform all Planning Authorities in whose areas the services will be operated of the application with the request to give directions with regard to the application based on its Integrated Transport Plan within the period stated in the notice.

6.1.9 Regulatory function of the Fetakgomo- Tubatse Local Municipality

The Sekhukhune District Municipality or local municipalities under its jurisdiction may be allowed to execute an Operating License Strategy. The execution of this function is supported by Section 18

(1) of the National Land Transport Act, Act No.5 of 2009, which set out regulatory functions of the municipalities with respect to the execution of an Operating Licensing function. Section 11(2) of the Act states that the municipality "must receive and decide on applications relating to Operating Licenses for services wholly in their areas of jurisdiction, excluding applications that must be made to the National Public Transport Regulator or a Provincial Regulatory Entity.

6.1.10 Decisions taken by Municipalities on the issuing of Operating Licenses

Section 18 (2), (3) and (4) respectively states,

- In considering applications regarding operating licenses, such municipalities must in terms of services provided in terms of their Integrated Transport Plan, apply that plan and give due regard to the relevant Provincial Land Transport Framework.
- Such a municipality may give notice in the prescribed manner that it will no longer receive applications for operating licenses for new services except in accordance with invitations given by it for specified services on specified routes or in specified areas in accordance with its Integrated Transport Plan, either for the purpose of concluding a contract or because those

routes or areas are already adequately served.

- Such a municipality may, in appropriate cases, make inquiries or hold hearings to enable it to perform its functions contemplated in this section, and also has the prescribed powers.
- For the purposes of dealing with the issuing of operating licenses from the Sekhukhune District Municipality to the City of Tshwane, Capricorn, Nkangala and Enhlazeni District Municipalities, there has to be an inter-municipality forum in and this is supported by Section 19(1) of the National Land Transport Act, Act No. 5 of 2009.

6.1.11 Decisions taken by Municipalities (Operating Licenses for Buses)

Section 55(3) states, "where 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 subsidized service contract or in terms of operating licenses as shown by its integrated transport plan, the planning authority must direct the National Public Transport Regulator or a Provincial Regulatory Entity to refuse the application.

6.1.11.1 Operating licenses for contracted services

Section 56(1) states that where a contracting authority has concluded a negotiated contract, subsidized service contract or commercial service contract with an operator, the relevant regulatory entity, must issue to the operator an operating license for each vehicle involved in the contract, or where the operator already has an operating license for such a vehicle, such entity must amend the operating licenses if necessary to accommodate the services in the contract.

The authority conveyed by an operating license must be made specific to the contract and be for the validity period of the contract, but an operating license may authorize services in addition to those stipulated in the contract. Where a contract is amended so as to change the authority conveyed by the operating licenses, or to extend the duration of a contract, the relevant regulatory entity must amend the relevant operating licenses accordingly.

6.1.11.2 Application with respect to operating licenses for non- contracted services

Section 57(1) states that where an application is made to the National Public Transport Regulator, for the granting, renewal, amendment or transfer of an operating license in respect of a non- contracted service other than a tourist transport service, it may grant or refuse it after having considered:

(a) In the case of a service shown in an integrated transport plan, the directions of the planning authority.
(b) Whether the vehicle or type of vehicle by means of which the service is to be operated is suitable for that purpose.
(c) The availability of ranks, terminals or other facilities, based on the recommendations of the relevant planning authority or other information at its disposal.
(d) The existence of any relevant by-law, regulation, prohibition, limitation or restriction.
(e) Whether the applicant has any previous conviction for an offence relevant to the operation of public transport services, or of a prescribed type.
(f) The ability of the applicant to operate the service for which the operating license is sought, in a manner satisfactory to the public.

Section 57(2) provides "where an application is made to a municipality to which the operating license function has been assigned for the granting, renewal amendment and transfer of an operating license in respect of a non-contracted service, it:

(a) Must refuse the application if granting it would contrary to the relevant integrated transport plan
(b) My grant or refuse it after having considered:
(i) Whether the vehicle or type of vehicle by means of which the service is to be operated, is suitable for that purpose.
(ii) The availability of ranks, terminals or other facilities
(iii) The existence of any relevant by-law, regulation, prohibition, limitation or restriction
(iv) To check if the Applicant has any previous conviction for an offence relevant to the operation of public transport services or of prescribed type
(v) The ability of the applicant to operate the service for which the operating license is sought, in a manner satisfactory to the public.
(vi) Recommendations or documents duly submitted with the application by the applicant or any other interested party.

Section 57(3) states "where an application is made to a Provincial Regulatory Entity for the granting, renewal, amendment or transfer of an operating license in respect of a non-contracted service, it must refuse the application, if granting it would be contrary to the directions of the relevant planning authority or authorities based on their integrated transport plans.

Section 57(4) pronounce that the Minister may make regulations prescribing that types of applications specified in the regulations must be submitted to stakeholder forums or other persons or entities for their comments, and that the relevant entity must consider those comments before it takes a decision.

Section 57(5) provides that the entity granting an application for the granting, renewal,

amendment or transfer of an operating license may do so subject to any conditions, determined by it, that are not inconsistent with this Act or with relevant Provincial laws or transport plans, and must do so where such conditions have been stipulated by the planning authority based in its integrated transport plan. Such condition may state a maximum number of passengers that may be carried in the vehicle, even if the capacity of the vehicle is greater.

6.1.12 Maximum validity period of operating licenses

An operating license is valid for a maximum period of seven years. Operating licenses must be granted for a fixed period determined by the entity granting them, where applicable based on the direction of the planning authority. In determining the validity period of operating licenses for non-contracted services, the following must be considered:

- Current and envisaged trends in utilization on the route or routes, or, where applicable, in the area concerned.
- The efficiency of the proposed services in meeting user needs.
- Where applicable, the likelihood that in future the service may no longer be required in terms of the integrated transport plan.
- The likelihood that the service may become the subject of a commercial service contract or a subsidized service contract.

6.1.13 Renewal amendment or transfer of operating license or permit

Section 58(1) states that the holder of an operating license issued by a regulatory entity may apply to whichever of those entities that issued the license for renewal, amendment or transfer of the operating license.

Section 58(2) provides that where an operating license or permit was issued by a Provincial Operating Licensing Board or other competent entity before the date of commencement of this Act, the holder may apply for renewal, amendment or transfer thereof to the relevant entity.

6.1.14 Publication of decisions

Section 59(1) provides that regulatory entities must, in the prescribed manner, give notice of receipt of an application for or in connection with an operating license, except a decision to replace a vehicle and in that notice state the prescribed particulars and allow interested persons an opportunity to comment and make representations within the prescribed period.

Such entity must duly consider all comments and representations received that are daily submitted and are relevant in dealing with the application. Where no relevant and substantial objections are received in respect of an application, it may be disposed of summarily and where such objections are received the entity must request further information or hold a hearing in the prescribed manner before taking a decision on the matter.

6.1.15 Special events

No person may undertake a public transport service to or from a special event except in the course of operating a courtesy service or tourist service that complies with the Act. In the case of where a temporary operating license is issued to operate special events, it may be issued only for one particular special event and for a period that is not longer than the duration of such event, including time needed for preparing for it before the event and transporting passengers to airports, stations and other transfer facilities after the event.

A temporary operating license must:

- Specify the special event and the date or dates on which it occurs
- Where feasible, state the route or routes on which the transport to and from the special event may be provided
- Where appropriate specify the terminals, ranks or stopping places that may be used.

A temporary operating license may be issued with a special distinguishing mark which must be affixed to the vehicle to which the licensee relates in the prescribed manner for the duration of the public transport to and from the special event.

6.1.16 Authority conveyed by operating licensee

An operating license does not authorize the holder to undertake transport on or over a road if it is unlawful to do so in terms of any other law, nor does it exempt the holder from the obligation to comply with any requirement or condition imposed by or in terms of any law, license or permit issued by any other competent authority.

6.1.17 Persons who may hold operating licenses

Section 64(1) states that an operating license may only be issued to and held by the person registered, in terms of the National Road Traffic Act, as the owner or operator of the vehicle, as defined in that Act, and specified in the operating license. Where an operating license relates to a contracted service, an operating license may be issued to the subcontracted operator only if:

- The subcontracted operator is the registered owner or operator of the vehicle used for that service on behalf of the operator party to the contract:
- That vehicle is specified in the operating licensee as the vehicle to be used

for operating that service.

6.1.18 Long distance services

Section 65(1) says,

'if approved by the planning authority, an entity granting an operating licenses may authorize the vehicle specified in that licensee to be operated for a long distance service, despite the fact that the vehicle is specified in the operating license to be used for a service provided for in an integrated transport plan'.

The planning authority may not grant such an authorization where the operation of the long distance service will or is likely to be detrimental to the operation of the services provided for in that ITP.

In the case of an application for the granting, renewal or amendment of an operating license relating to a long distance service, due regard must be heard to the provisions of any integrated transport plan, where they are relevant, and to any applicable provincial laws, and it must be subject to:

- The extent to which the service to be provided is necessary or desirable in the public interest
- The requirements of the public for the service along the route or routes on which or the area in which the applicant proposes to operate.
- The existing transport facilities available to the public on that route or those routes or in that area
- The need to ensure co-ordination of all forms of transport, including transport by rail, to achieve an economically sound balance between the transport modes, with due regard to the public interest. Operating licenses for long distance services other than charter or tourist transport services must specify the authorized origin and destination points, the ranks or terminals for the picking up and dropping off of passengers and any other points along the route or routes where passengers may be picked up or dropped off.

6.1.19 Metered taxi services

Section 66(1) states that "in the case of a metered taxi service,

- The entity granting the operating license may specify an area for picking up passengers
- If the operating license or permit specifies such an area, the vehicle may leave that area if, on the return journey, it is to carry the same passengers that it carries on the outward journey or if the vehicle is to return empty.
- The vehicle may pick up passengers outside of that area if the fare is pre-booked and the passengers will return to such area.
- Any particular journey may be operated at a fare not determined by the meter if the fare for that journey has been agreed upon before the journey begins, but the meter must be kept running for the information of passengers.

6.1.20 Charter services

Section 67(1) states that an operating license may authorize the holder to undertake pre-booked charter services in the areas or zones as specified by the entity granting the operating license, which may or may not be in addition to other services authorized by that license. If the operating license specifies an area for picking up passengers, such a vehicle may:

- Leave the area or zone described in the operating license if, on the return journey, it is to carry the same passengers that it carries on the outward journey or if the vehicle is to return to that area empty.
- Pick up passengers outside that area or zone if the fare is pre- booked and the passengers will return to such area.

Where application is made for an operating license for vehicle hires with drivers as charter services, the entity granting the operating license must evaluate whether the services should rather be provided as metered taxi services, and, if it grants the application for a charter service, should attach appropriate conditions.

6.1.21 Staff services

Section 68(1) provides that the Minister may, prescribe the circumstances in which an operating license is required for staff services. In the case of staff services to be provided on a regular basis, the operating license must specify the route, routes or area authorized.

6.1.22 Lift clubs

Section 69(1) provides that the Minister may make regulations on the requirements to qualify for a lift club, or operating such clubs, including, but not limited to:

- The requirement that written confirmation from the employer or other documentation must be kept in the vehicle.
- The requirement that lift clubs must be registered with planning authorities or other entities
- Requirements relating to insurance.

Such regulations may relax the requirement that each member of the lift club must take a turn to convey the others, if sufficient safeguards are provided to prevent abuses and protect passengers.

6.1.23 Tuk-tuks

A Tuk-tuks is a motorized three-wheeled cabin cycle for private use and may be used for hire. In terms of the National Land Transport Act, Act No.5 of 2009, Section 70(1) provides that Tuk-Tuks may be used for public transport services where relevant transport plans allow for this. Where a Tuk-Tuks is so used, the operating license must stipulate the urban route, road network or area on or within which it must operate, as shown in the relevant integrated transport plan, and a maximum speed of operation.

In the event a Tuk-Tuks is considered for use within the Fetakgomo- Tubatse Local Municipality, the operating license must stipulate the route within which such Tuk-Tuks should operate and prescribe the maximum permissible speed of operation.

6.1.24 Adapted light delivery vehicle

The larger part of the Fetakgomo- Tubatse Local Municipality is comprised of rural areas and operators of public transport vehicles may experience the problem of accessing some of these rural areas. In this case, adapted light delivery vehicles may be used and this is provided in Section 71 of the National Land Transport Act, Act No.5 of 2009 where it states that "adapted light delivery vehicles may be used for public transport services in a particular area in prescribed circumstances where there is no other appropriate or acceptable public transport, and subject to prescribed conditions".

6.1.25 Transporting of scholars, students, teachers and lecturers

In the event where a need to transport scholars, students teachers and lecturers arises, within the Fetakgomo- Tubatse Local Municipality, Section 72(1) of the National Land Transport Act, Act No.5 of 2009 can be applied and is outlined as follows,

'where a public transport service is dedicated to transporting scholars, students, teachers or lecturers, the Minister may prescribe regulations on special requirements for those services, including, but not limited to:

- Requirements for supervision of scholars
- Special requirements for drivers
- Requirements for insurance
- Documents that must be kept in the vehicle and special vehicle markings or livery
- Requirements that drivers of other vehicles must stop those vehicles in the vicinity of vehicles loading or offloading scholars or students.

6.1.26 SUMMARY

The Operating License Strategy and the Rationalization Plan in this report are carried out simultaneously, since they are closely related and simply address different aspects of the planning

for the public transport network. The role of each mode should be based on the network planning carried out for the Rationalization Plan. The role of a mode depends largely on the demand on a certain corridor or route – generally, the higher the demand, the larger the means of transport used. However, population densities should be taken into account in rural areas. Although the number of people to be transported may be fairly high, the settlements may be so widely dispersed or relatively inaccessible, that a number of smaller vehicles may be a more effective option than having fewer larger vehicles. The accessibility of the settlements will also influence the type of mode and vehicle used. A low floor bus, for instance, is completely unsuitable for use on an unpaved road.

With respect to regulation and the number of operating licensees to be issued, national policy is currently one of competition for a route rather than on a route. The application of this policy is relatively clear in the case of tendering for a contract. However, it is less clear when it is applied to unsubsidized, un-contracted services. The approach has largely been one of registering existing operators and converting permits to operating licensees. If there are still too many operating licenses issued for the demand on a route or corridor, it is not apparent how this can be effectively dealt with other than through natural attrition – operators leaving the industry and subsequently no additional operating licensees being issued. The other option would be to offer operators compensation for their operating licensees. In terms of current planning requirements, it is clearly crucial that operating licensees have a period of validity attached to them.

It is also not always evident who should be awarded a new operating license. Currently it largely works on a "first-come, first-served" basis, as long as basic requirements are met. If a planning authority wants to award new operating licensees to those operators who provide the best level of service, this may have to be done through a commercial contract by asking operators to tender for the operating licensees on the basis of what level of service they are prepared to offer for the license (no subsidy would be involved). There are currently no known examples of this being applied in South Africa and the precise legal implications may need to be checked.

The sophistication of the regulatory system applied to provide the required public transport network also needs to be balanced with law enforcement capabilities. There is little point, for instance, in developing a complicated contracting system that requires intensive monitoring in inaccessible rural areas with few enforcement resources.

6.2 Public Transport Operational Strategies (Rationalization Plan)

6.2.1 Introduction

In any public transport competitive battleground where the routes are almost saturated, Section 39(1) of the National Land Transport Act, Act No.5 of 2009 intervenes as a relief to empower the planning authority where possible to:

(a) Offer the operator an alternative service, or
(b) Allow the operator to continue providing the service and impose a moratorium on the issuing of new operating licensees on the route.

If required, i.e. if there are subsidized bus services in the area, a Bus Rationalization Plan must also be prepared. Rationalization Plans will only be required from those Type 2 Planning Authorities with subsidized bus contracts operational in their area.

The Rationalization Plan aims to:

- Rationalize subsidized services by minimizing competition between subsidized services, including

services across the borders of Planning Authorities;

- Determine how subsidies should be minimized, but – where subsidies are necessary – where and to what extent these should be paid;
- Promote competitive bidding for contracts;
- Ensure that routes and route networks are utilized optimally so as to meet passenger need; and
- Facilitate the future development of the public transport system.

Operators	Number of subsidized
Great North Transport (18)	Unsubsidized
Sekhukhune Express	Unsubsidized
Nnyanashakwane Bus Service	Unsubsidized
Mahlangu Bus Service	Unsubsidized
Thembalethu Bus Service	Unsubsidized

Table 6.1: Number of subsidized routes in FTLM

6.2.2 Contents of the Rationalisation Plan

In the event of where a Rationalization Plan is prepared for the Fetakgomo- Tubatse Local Municipality, it must include at least the following information:

- Introduction: A description of the area and nature of the public transport services under consideration;
- Assessment: An assessment of status quo information as contained in the Current Public Transport Record (Transport Register), the Operating License Strategy and the Subsidy Information System (SUMS) to identify services, routes and trips to be targeted for rationalization;
- Policy framework: Policies relating in particular to: the packaging of subsidized services contracts; rail concessions and contract terms; subsidy policy; levels of service; land use development; modal integration and special categories of passengers, must be outlined;
- Rationalization and restructuring: A preferred set of proposals must be developed on how to restructure the identified services earmarked for rationalization. All such proposals must be assessed with respect to possible impacts on subsidies, other services and modes, facilities, as well as user convenience and quality of service. A perspective on the future development of the public transport system must be provided;
- Stakeholder consultation: The manner in which all stakeholders were involved in the process of preparing the Rationalization Plan must be described. The public participation process must allow for adequate advertising of the draft plan, and allow existing operators adequate opportunity to make representations should they feel that their rights are being affected;
- Implementation: This should be a description of the manner in which the Ratplan is to be implemented; and
- Financial: Any financial implications of the implementation of the Ratplan must be documented, including funding sources and budget.

In line with current national policy, as outlined in the Cabinet- approved Public Transport Strategy and Action Plan (March 2007), it is suggested that a Rationalization Plan should be prepared irrespective of whether or not there are subsidized services currently in the Municipality. The rationale for this is that simply rationalizing existing subsidized services serves only to perpetuate the status quo. Furthermore, if no subsidized services were to exist, then no further consideration would be given to the overall public transport network and the need for subsidies within the network. It is also recommended that the Rationalization Plan should be carried out simultaneously with the Operating License Strategy. Subsidies should be applied to those areas and services in the municipality identified as being in need of subsidies in terms of the national and provincial subsidy policy. The first step should therefore be to ensure familiarity with this subsidy policy. Aspects such as capital (e.g. vehicle) versus operating subsidies versus investment in public transport infrastructure should be considered.

The second step is to develop a network of public transport routes and corridors for the Municipality that will serve the main passenger demand. In the case of rural areas, this demand may be quite widely dispersed and the necessary road infrastructure may not always exist. It is also unlikely that subsidized rail services are provided in many Municipalities. Nevertheless, potential demand needs to be identified even if it is not currently being served. The proposed public transport network (rail and road-based, trunk and feeder routes) should be mapped on a Geographic Information System (GIS). Existing public transport routes, including subsidized routes, should also be mapped on the GIS and a gap analysis carried out of both the public transport coverage and the coverage provided by the subsidized services.

The proposed public transport network should be sized sufficiently to allow for the services to be broadly calculated. Acceptable fare levels should be determined and a revenue flow analysis conducted. The difference between the estimated service costs and revenue will indicate the need for subsidy. Depending on the subsidy policy, e.g. subsidy being aimed at the poorest households, decisions should be made on the areas / corridors / routes to be subsidized. Caution should be exercised if the policy states that there should not be subsidization of parallel services or modes. It must, firstly, be clearly determined whether any parallel

services are in fact parallel (i.e. serving exactly the same origin-destinations), and not simply running parallel for a portion of the corridor or route.

The public transport services should be packaged into corridors or routes and contracts. Those contracts that are to be subsidized should be identified and prioritized. The contracts should be drawn up and let in terms of the existing legislative requirements. It must be remembered that subsidy is at this stage managed by the provinces with funding provided by the Department of Transport. Therefore, the province should be involved in making decisions at all stages related to subsidized services.

6.2.3 Involvement of Municipalities in Public Transport Services

Section 45 of the National Land Transport Act, Act No.5 of 2009, states that no Municipal Operator may tender for any commercial service contract or subsidized service contract, unless it is financially ring-fenced in the prescribed manner and it complies with the other requirements prescribed by the Minister. A Municipality may not use its Municipal Fund to subsidize a Municipal Operator unless that body is a juristic person separate from the municipality and the subsidies are paid in terms of a subsidized service contract concluded between the municipality and such Municipal Operator.

6.2.4 Negotiated contracts

Section 41 states that contracting authorities may enter into negotiated contracts with operators in their areas, once only, with a view to:

- Integrating services forming part of integrated public transport networks in terms of their integrated transport plans;
- Promoting the economic empowerment of small business or of person previously disadvantaged by unfair discrimination;
- Facilitating the restructuring of a parastatal or municipal transport operator to discourage monopolies

.

6.2.5 Subsidized service contract

The contracting authorities must take steps within the prescribed period and in the prescribed manner before expiry of contracts to put arrangements in place for the services to be put out to tender so that the services can continue without interruption. Section 42(4) provides that only a contracting authority may enter into a subsidized service contract with an operator, and only if the services to be operated in terms thereof, have been put out to public tendering and awarded by entering into a contract in accordance with prescribed procedures and in accordance with other applicable national or provincial laws.

6.2.6 Rationalization of existing services

Section 47 of the National Land Transport Act, Act No.5 of 2009 provides that all permits issued for a definite period remain valid but lapse when that period expires provided that if such a permit is still valid on a date calculated as seven years from the date of commencement of this Act, it will lapse on that date. All permits issued for an indefinite period remain valid, but lapse seven years after the date of commencement of this Act, but the holder may apply within that period for its conversion to an operating license to the entity that is responsible for receiving applications for operating licensees for the relevant services.

6.2.7 Rationalization of existing schedule services

Where a permit authorizes scheduled services provided for in a contract between a contracting authority and the permit holder, the contracting authority and permit holder, the contracting authority must request the relevant regulatory entity to:

- Cancel the permit and issue an operating license for the vehicle specific to the contract, where appropriate in consultation with other relevant planning authorities.
- Cancel any permit of that holder authorizing services on routes in the area on an un-contracted basis, and not carry forward such authorization to the operating license.

No contract may be awarded to an operator for scheduled services unless all permits and operating licenses of that operator have been rationalized.

6.2.8 Rationalization of Minibus Taxi -Type Services

Permits issued for minibus taxi-type services remain valid. The holder of a permit or operating license for a vehicle authorizing minibus taxi type services who has not yet done so may apply in the prescribed manner for recapitalization of the vehicle and may choose either to:

- Leave the industry, in which case the Department must cancel the permit or operating license.
- Acquire a new compliant vehicle that has the same passenger capacity as the vehicle specified in that permit or operating license, or not more than 20 percent variance, in which case the operator shall be entitled to an operating license for the new vehicle authorizing the same services on submission of a valid tax clearance, and such operating license must specify in detail the route or routes to be operated, which must be those operated by the operator for the period of 180 days prior to the date of application.

Any permit or operating licensee authorizing minibus taxi type services issued for

an indefinite period, or issued for a definite period that has not yet expired, must lapse seven years after the date of commencement of this Act.

6.2.9 Summary

The Rationalization 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 Rationalization Plan is to minimize competition between subsidized services, including services across the borders of planning authorities. Most importantly, a rationalization Plan should assist in determining how subsidies should be minimized more especially where subsidies are necessary. 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 subsidized services.

MODAL INTEGRATION STRATEGY FOR THE FETAKGOMO TUBATSE MUNICIPALITY

The FTLM should make provision for

- An integrated network Integrated schedules;
- Proper transfer facilities;
- Common ticketing and fare system, including through ticketing; and
- A combined information system, including Call Centers.

6.3 Introduction to Modal Integration

Modal integration refers to the integration of some or all of the different public transport modes (mainly trains, buses and taxis) into the public transport system, in such a way that these modes support and complement each other and that they operate as a coordinated public transport system, while providing an effective efficient and affordable service to the user.
At the end, modal integration should support the transport vision in providing an integrated public transport system where taxis, buses and trains operate in a single seamless system within:

- intermodal transfer facilities;
- an integrated network;
- integrated schedules;
- common ticketing and fare system, including through ticketing;
- a combined information system, including call centers.

For the purposes of this Integrated Transport Plan, modal integration will therefore mean an integrated public transport system, consisting of various modes of transport that enables a person to move easily from any place in the FTLM to any other place with seamless transfers.

6.4 Problem statement

In the entire Fetakgomo- Tubatse Local Municipality very little evidence is available on seamless integrated public transport services that are operated in the best interest of the passenger. The purpose of this Modal Integration Strategy is to provide a seamless transport system for the Fetakgomo -Tubatse Local Municipality. The "Project Implementation Action Plan" will encompass executable projects which have been identified as components of a Modal Integration Strategy. Of critical importance to take note of is that "Modal Integration" cannot be planned and implemented in isolation, but must be part of a holistic Fetakgomo-Tubatse Integrated Transport Plan.

Currently, the Fetakgomo -Tubatse is experiencing a high volume of traffic density on the Dilokong Corridor, particularly on the R37 both inbound and outbound. The major public transport services in the Fetakgomo- Tubatse are bus and taxi operations. Most roads in the periphery of the Fetakgomo- Tubatse are poorly designed and have not been maintained with specific attention to storm water drainage.

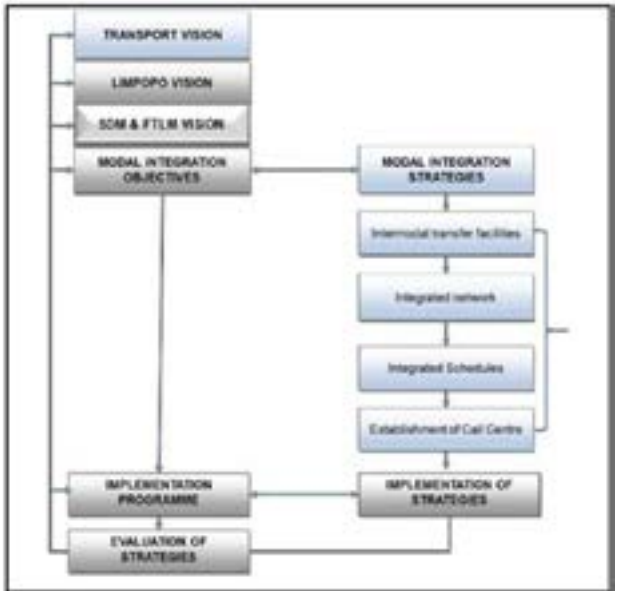


Figure 6.4 FTLM Modal Integration Strategy


Fetakgomo-Tubatse Local Municipality
Fetakgomo-Tubatse Local Municipality
Integrated Transport Plan 2020-23

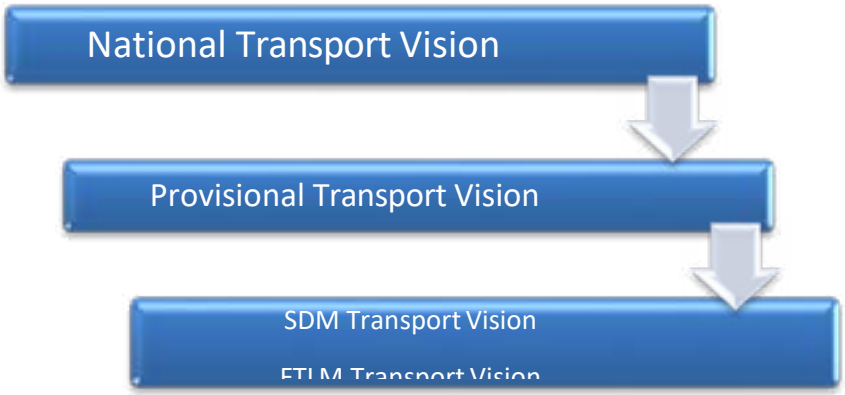
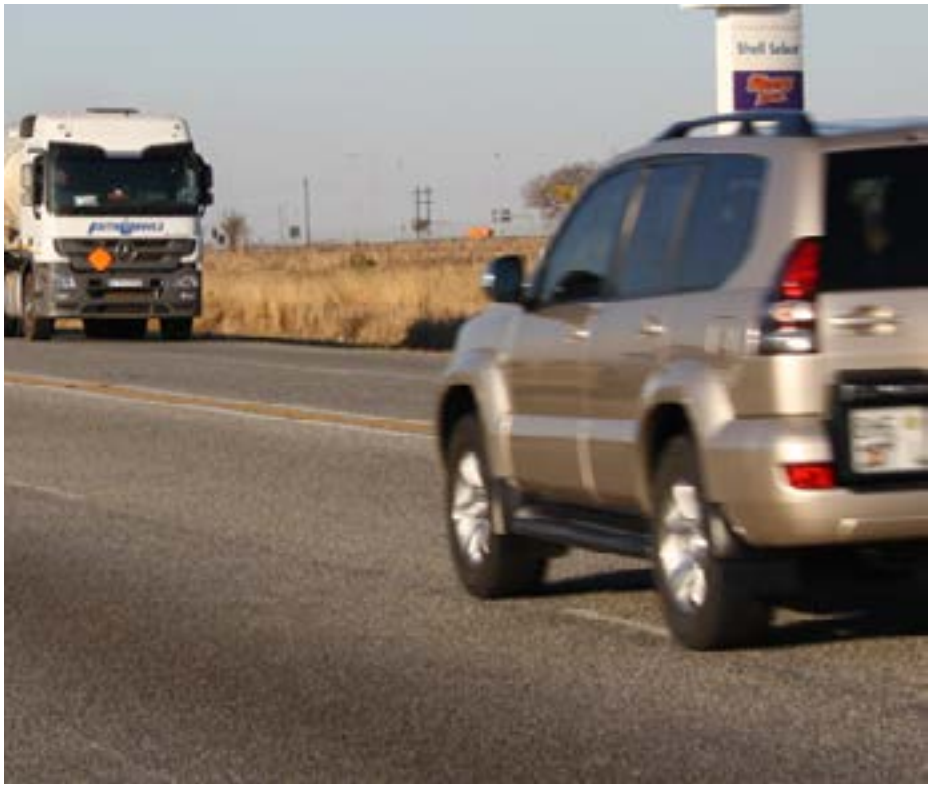


Figure 6.5: Hierarchy of Transport Vision



6.5.1 Transport Vision

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

6.5.2 Limpopo Provincial Vision

Quality transport infrastructure for all.

6.5.3 SDM Vision

SDM: Oriented leader in service delivery.

6.5.4 FTLM Vision

FTLM: "A developed Platinum City for a sustainable human settlement"

6.6 Modal Integration Objectives

- To develop and successfully implement an integrated, affordable and accessible public transport system for the Limpopo Province.
- To ensure that provision is made for the financing of integrated public transport and thus modal integration, through a holistic funding strategy.
- To promote and assist with the development of public transport plans which contain specific proposals for modal integration.
- To provide the correct institutional structures at all levels of government to assist with the planning for and implementation of modal integration.
- To ensure that proper consultation takes place on modal integration with all the role players and stakeholders.
- To market modal integration.
- To promote land development supportive of integrated public transport
- To identify strategic networks, supporting networks and suitable nodes within the Limpopo Province where modal transfers can take place.
- To identify and support the development of suitable infrastructure that would be conducive to modal integration.
- To utilize each mode in the circumstances for which they are technologically and economically best suited.
- To integrate schedules and other operational aspects of the various modes so that travel time is reduced and service quality enhanced.
- To introduce effective and efficient through-ticketing systems based on the cost of service provided by each mode.

- To establish effective information systems for users of integrated services.
- To monitor modal integration in the Province of Limpopo.
- To identify and implement pilot/ demonstration projects in the Province where certain aspects can be further investigated and the advantages of modal integration can be demonstrated to the public.

6.7 Modal Integration Strategies

The main point of departure needed to facilitate the implementation of a Modal Integration Strategy is the crafting of an enabling legislation or legal framework at both National and Provincial levels of government. Based on the fact that government has the power of eminent domain, the identification and development of suitable areas for the development of intermodal facilities would require an appropriate legal framework to facilitate the process.

6.7.1 Intermodal Transfer Facilities

The building or rehabilitation of appropriate intermodal transfer facilities to enable various modes of transport to provide complementary, seamless and sustainable transport services is critical if the vision of "fully integrated transport operations and infrastructure" is to be accomplished. There is a critical need to formalize and construct or build, operate and maintain modal facilities within the Fetakgomo -Tubatse Municipality.

6.7.2 Non- Motorized transport needs

Non-motorized transport can be categorized into ordinary walking, cycling and animal drawn transport projects. The National Household Surveys pointed out that non-motorized transport is unavoidable within the FTLM and there is therefore a need to promote this important mode of transport.

6.7.2.1 Encouraging walking as a mode of transport

Button et al (2010) are of the view that walking is the most basic form of human locomotion, and in terms of numbers, pedestrians form the largest transport of 'user group' anywhere on earth. Even in industrialized countries, where motorized modes have the highest modal share in terms of distance travelled, virtually every trip begins and ends on foot. Comparatively speaking, within the Fetakgomo - Tubatse Local Municipality, walking predominantly play a much greater role than in industrialized areas such as Johannesburg.

6.7.2.2 Cycling as a mode of transport

Cycling is one of the non-motorized modes of transport that needs to be considered for implementation within the FTLM. It needs to be pointed out that a bicycle transport project was launched and was named Namela Le Sechaba. A considerable number of learners were identified within the Blouberg Local Municipality around the Krantz Plaatz and Eldorado Villages. There are also similar bicycle projects that are being implemented from Department of Transport level called Shova Ka Lula which need to be synchronized with that of the District and Local Municipal projects.

6.7.2.3 Animal drawn transport

The implementation of these two projects would require a policy outlining how animal drawn carts should respond to the rules of the road. There has to be explicit policies, bylaws, regulations and procedures that would promote adherence to the safety culture.

6.8 Implementation of Strategies

6.8.1 Integrated Network

Networks provide the infrastructure for the movement of people, goods and services (Button et al, 2010:287). Integrated public transport service networks forms a major component of creating dignified and livable urban spaces. A prioritized network in the heart of the Fetakgomo -Tubatse Local Municipality would therefore serve as a basis for anchoring land use development in order to maximize network utilization and to minimize travel distance and time.

There is a need to identify intermodal facilities that would promote the concept of modal integration where the following aspects need to be given attention, namely;

- An integrated network
- Integrated schedules
- Proper transfer facilities
- Common ticketing and fare system, including through ticketing
- A combined information system, including Call Centers

6.8.2 Integrated Schedules

The route utilization survey undertaken within the Fetakgomo Tubatse modal facilities is a point of departure in giving a clear indication of where strategic intermodal facilities need to be located.

6.8.3 Establishment of Call Centres

At the strategic areas of the Fetakgomo- Tubatse Local Municipality, there has to be an information Centre or call Centre. The Call Centre would serve the needs of both transport and Tourism industry. This should be considered as a project for the

2019/20/21 Medium Term Expenditure Framework (MTEF).

6.8.4 Through ticketing

Button et al (2013:207) states "integrated ticketing permits passengers to make journeys that involve transfers within or between different transport modes or transport operators with a single ticket that is valid for the complete journey". In order to promote the concept of seamless transport system within Fetakgomo Tubatse Local Municipality, there has to be a project that promotes using one ticket that operates throughout various modes of transport. For example, the Great North bus company needs to consider working hand in hand with the passenger rail system such as PRASA, whereby the same ticket can be valid to enable an individual to change modes without any inconvenience.

6.9 National Land Transport Strategic Framework (NLTSF)

The NLTSF (2006) states that public transport services, facilities and infrastructure must be so designed, provided and developed so as to promote inter-modalism and the integration of the different modes of land transport. Despite many years of effort of achieving integration, the implementation of ITPs has proved to be problematic with many authorities planning and implementing independently of one another. Mechanisms and structures are needed to facilitate and ensure such integration.

By borrowing some wisdom from International experience on the implementation of modal integration strategies, Hong Kong focused on the integrated fare collection system which was based on electronic smart cards that are widely used for all transport payments, including parking. Singapore introduced a magnetic strip, stored value fare card for bus and train travel. The country went on to form an entity that produced a transit travel guide that was meant to coordinate transit travel information such as routes, timetables and multi-modal data at interchanges.

Among the various elements of modal integration applied internationally, integrated ticketing appears to be a good starting point as evidenced by the progress made in Australia whereby trains were coordinated with bus services. This was followed by the introduction of complementary measures such as more bus and transit lanes and even congestion pricing.

6.10 Implementation Project Programme

PROJECT PROGRAMME	
DEVELOPMENT OF AN INTEGRATED TRANSPORT PLAN(ITP) FOR GTM	
PROJECT NUMBER:	
OBJECTIVES:	
INDICATORS FOR ACHIEVEMENT OF OBJECTIVES:	
PROJECT OUTPUTS:	
TARGETS / GROUPS:	
LOCATIONS:	
MAJOR ACTIVITIES:	
RESPONSIBLE AGENCIES:	
TIMING:	
COST:	
BUDGET ESTIMATES:	
SOURCES OF FINANCE:	

Table 6.2: Project Programme

The main goal of the FTLM should be to provide as much service as it can with its available resources. Attention is constantly devoted to the Medium Term Expenditure Framework as derived from the National Expenditure Framework (2019).

6.10.1 Learner transport

Provision should be made to provide learner transport and some sorts of economic support to learners to make transport affordable. This could be in the form of subsidizing tickets when boarding public transport. In some areas children travel extra- ordinary long distances to school. This is made worse by lack of affordable public transport in the area. In some areas there are no schools and other areas are bothered by lack of additional classrooms. In such problematic situations, rural transport could be the solution. This refers to the movement of learners by any mode of travel which does not necessarily have to be motorized or conventional, but should be suitable, cost -effective. A bicycle project for the learners within this Local Municipality could serve as a relief to the hardship faced by the poverty stricken

learners.

6.10.2 Walking as a Transport Project

A non-motorized transport project such as walking needs to be considered for implementation. In concurring with Button et al (2010) as already stated walking is the most basic form of human locomotion, and in terms of numbers, pedestrians form the largest transport 'user group' anywhere on earth. Even in industrialized countries, where motorized modes have the highest modal share in terms of distance travelled, virtually every trip begins and ends on foot. Walking and cycling as daily activities can promote health by providing physical activity, decreasing noise and air pollution. Special needs transportation services, which are referred by Button et al (2010) as para-transit is an alternative mode of public transportation that is provided by private or public operators for a certain group of special needs users. This mode of public transport is adaptable in its routing and scheduling to individual users' or operator' desires in varying degrees. This mode of transport aims to fill the gaps left among private cars, taxis and buses. Typically converted LDVs are used to provide special transport services particularly where a normal minibus taxi cannot penetrate due to topographical challenges.

6.10.3. Network Integration Project

There is a need to establish a hub-and-spoke network within the Burgersfort CBD. This would serve a range of geographically dispersed locations through its central hub.

6.11 Recommendations

- There has to be sound intermodal coordinating structures.
- There has to be special care during the design of public transport facilities, including ablution facilities.
- For the purposes of this Integrated Transport Plan, modal integration will therefore mean an integrated public transport system, consisting of various modes of transport that enables a person to move easily from any place in the FTLM to any other place with seamless transfers.

Chapter Seven

7. TRANSPORT INFRASTRATURE STRATEGY

7.1 Introduction

This Chapter is centered on the transport infrastructure in FTLM, it focuses precisely on the status quo of the public transport road network, modal facilities and improvements that are needed to make them user- friendly. The transport infrastructure under discussion is rail, road and aviation.

7.2 Transport infrastructure in Fetakgomo -Tubatse Local Municipality

7.2.1 Rail Infrastructure

The Sekhukhune District Municipality (SDM) is served by three railway lines, which were originally developed to support the mining activity within the district. The three railway lines are:

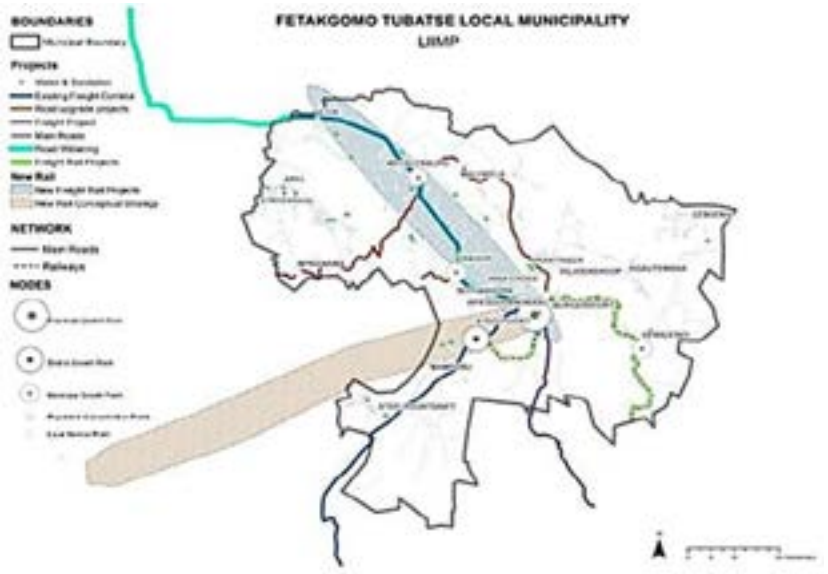
- The railway line entering the SDM from the South, next to Stoffberg, from where it continues northwards for approximately 30km, eventually ending at an abandoned mine near the Mapochs Mine.
- The railway line entering the SDM from the West, near Nutfield, from where it continues eastwards to Marble Hall.
- The railway line entering the SDM from the East, passing near Ohrigstad and Burgersfort, and ending near Steelpoort (near the Tubatse mine).

Rail transport system is nevertheless unable to meet the demand of transport service in the mines. The increasing mining activities in the FTLM (such as those along the Merensky Reef and Chrome layers) put more pressure on the road resulting in traffic congestion, accidents, high repair and maintenance cost, etc. which all combine to reduce productivity. Lack of maintenance and upgrade of road increase the economic inefficiencies of road. There is a need to encourage haulage of goods, to and from the mines to rail system, particularly those in bulk.

There are no commuter trains operating in this region. Favorably, a new commuter rail link between Pretoria and the south-west of the SDM (along the Moloto Road) is being considered, see Map 7.1. This rail link will improve accessibility to Gauteng, which represent an employment area for many residing within the southwestern extents of the District.

7.2.2 Road Infrastructure

There are three major roads, namely the R555, the R37 and the R36 traverse the area. Major towns such as Steelpoort, Burgersfort, and Ohrigstad as well as smaller towns such as Mooihoek and Bothashoek are located along these routes. The highest



Map 7.1: The proposed Moloto Corridor – Jane Furse – Burgersfort rail network
Source: Government (2017)

concentration of private transport is in Burgersfort and on roads R37 and R555. Burgersfort is the main economic centre in the FTLM area and the R37 and R555 are feeder routes to villages and mines. Road R36 to Ohrigstad and the R37 to Lydenburg cater mainly for tourists, as well as daily private vehicle trips. Traffic congestion in Burgersfort is significant and requires urgent attention. However, the 350 KM of roads are degrading rapidly due to a lack of maintenance and rehabilitation.

7.2.2.1 Infrastructure Maintenance

In order for infrastructure to be kept at an acceptable good working order it is important that it be maintained when required. Main advantages of maintenance include:

- Prolonged life and reduced rate of deterioration;
- Reduced operating costs;
- Reduction in accidents;
- Reduction in CO2 emissions and wastage of fuels; and
- Reduction/postponement of large capital investment in reconstruction.

There are three major types of maintenance activities:

- **Routine Manual**
  This is the type of maintenance that is required continually on every road whatever its engineering characteristics or traffic volume.

- **Routine Mechanized**
  This is the type of maintenance required at intervals during the year with a frequency that depends of volume of traffic using the road.

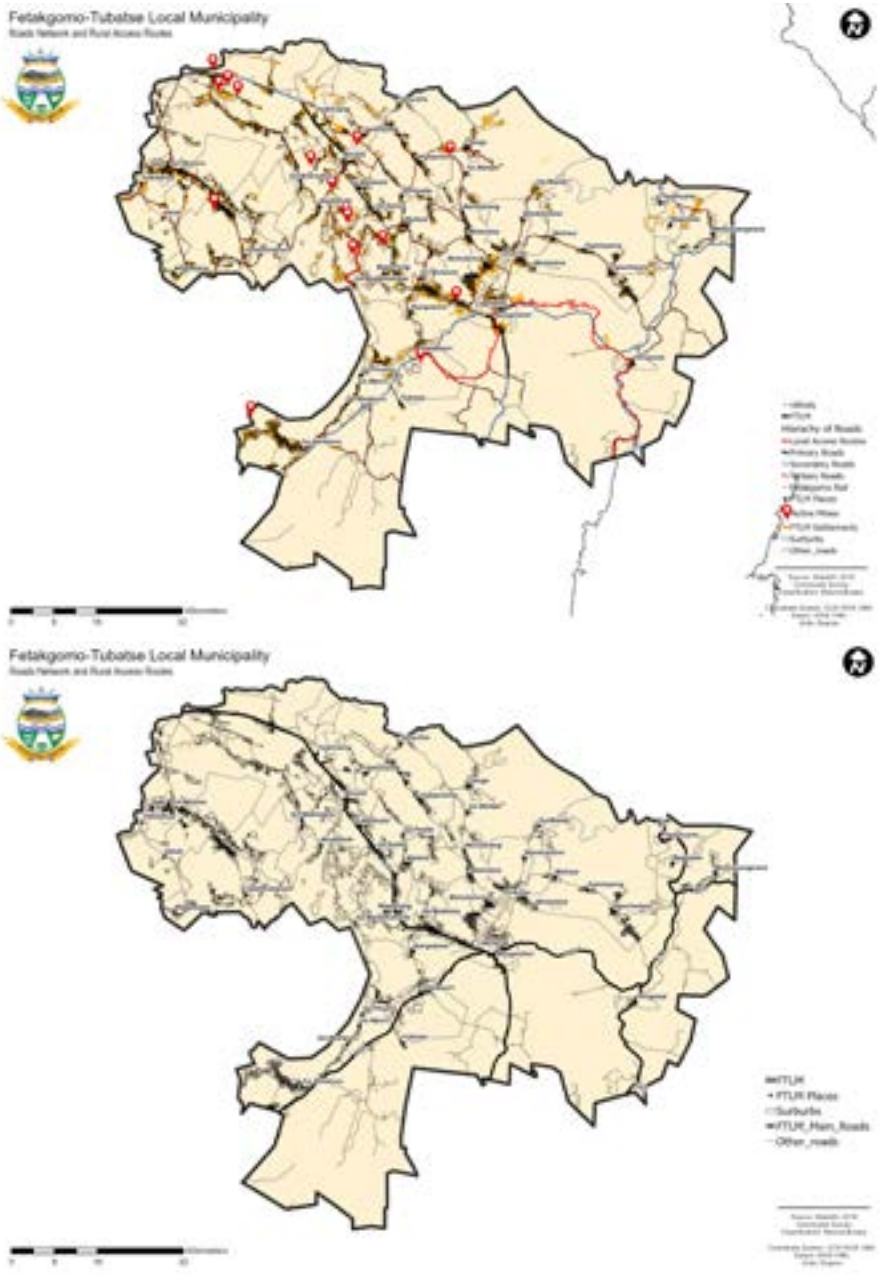
- **Periodic Maintenance**
  This is the type of maintenance activity that usually spans the whole length of the road required at intervals of several years.

The following are maintenance works required for unpaved roads:
- Grading;
- Spot gravelling; and
- Regravelling.

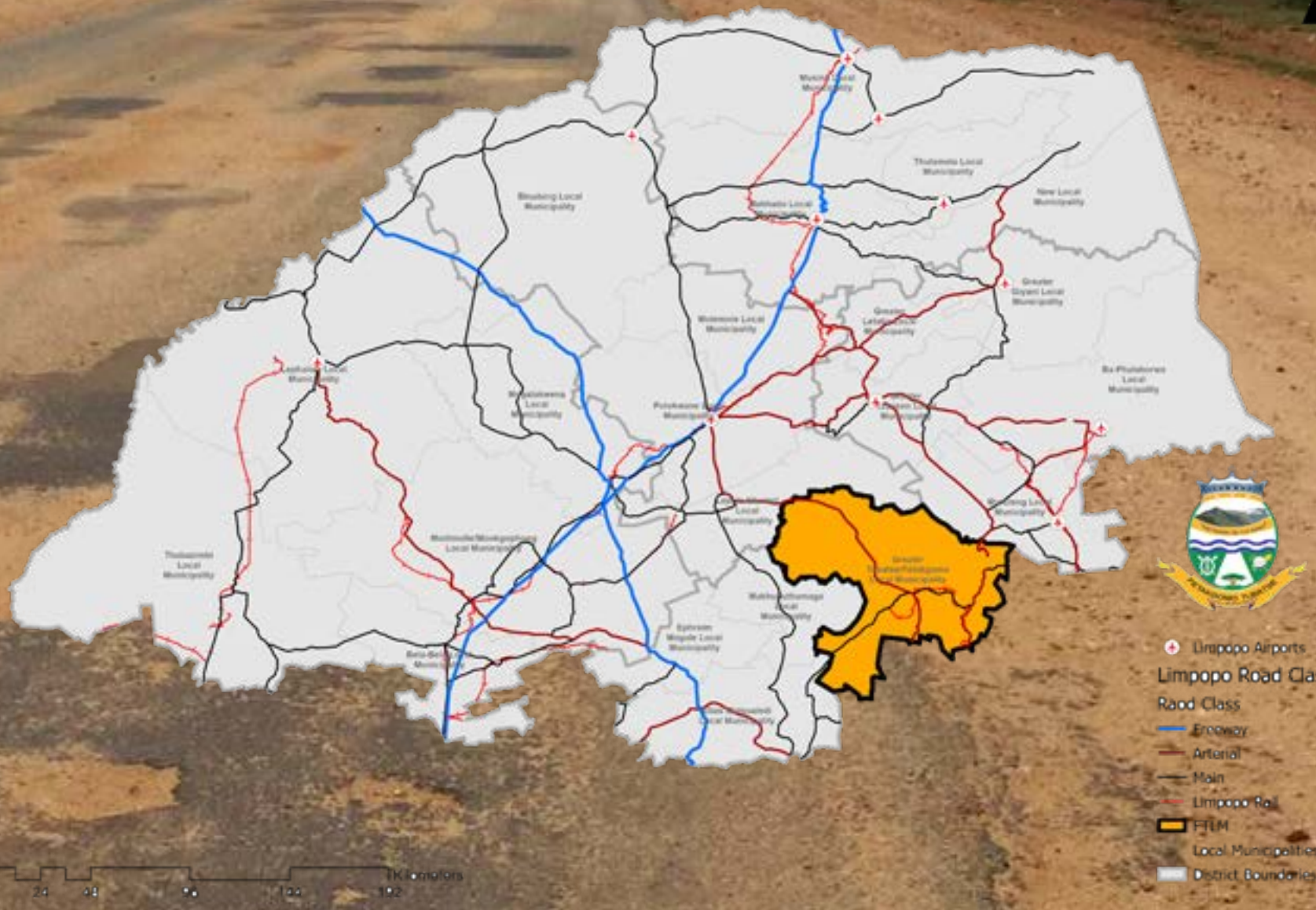
For paved roads, the following are the types of maintenance required:
- Routine pavement works;
- Preventive treatment works; and
- Resealing and Rehabilitation works.

7.2.3 Air Transport Infrastructure

There are two registered airfields are also found within the Sekhukhune District Municipality. The airfields are located in Marble Hall and Groblersdal respectively, and primarily support crop- spraying activities.



Limpopo Province Road and Rail Network



Chapter Eight

8 TRAVEL DEMAND MANAGEMENT

8.1 Introduction to Travel Demand Management (TDM)

Travel demand management refers to the strategies and policies aimed at achieving more efficient use of transportation resources and managing travel demand. It puts focus in reducing travel demand by giving priority to public transit, car sharing, carpooling, etc. The primary objective here is the movement of people and goods, rather than on motor vehicles.

There are many different strategies with a variety of transportation impacts that FTLM can adopt to reduce highly traffic congested R37 road (Dilokong corridor such as:

- Improvement transportation options available to consumers (e.g. mass public transport system)
- Changes in trip scheduling, route, destination or mode
- Reduction in the need for physical travel through more efficient land use or transportation substitutes

Travel demand management is an increasingly common response to transport problems – as such highly recommended in the case of FTLM. Worth noting is that most individual TDM strategies only affect a small portion of total travel, the application or approach has to be comprehensive. The cumulative impacts of a comprehensive TDM program can be significant with respect to the environment, public health, communities and life in the municipality.

8.2 Cost of Reaching Destination and Main Trip Purpose

Travel is the movement between certain points in time. Time and cost are variables of travel. The travel cost determines the monetary value while travel time refers to time spent travelling. In essence time and cost are direct determinants of the trips made by the users. *The National Household Travel Survey (2013) conducted by Stats SA found that the average travel time between home and work for commuters making use of public transport is 59 minutes. More than 1.3 million South Africans spend more than two hours a day travelling to and from their places of residence.*

Figure 8.1 presents the monthly average cost of reaching a destination from a national, provincial and local (FTLM) outlook, based on National Household Travel Survey, 2013, results. The people who use their own cars at both national and provincial levels spend more money on average in a monthly travel, The Figure depicts that a higher percentage of people spend more than R 200 in the modes of transport (bus, taxi, own car). However, travelling with a car/truck as a passenger is cheaper than R200.The figure shows that a wider percentage of people in FTLM spend more than R500 on a monthly basis for travel.

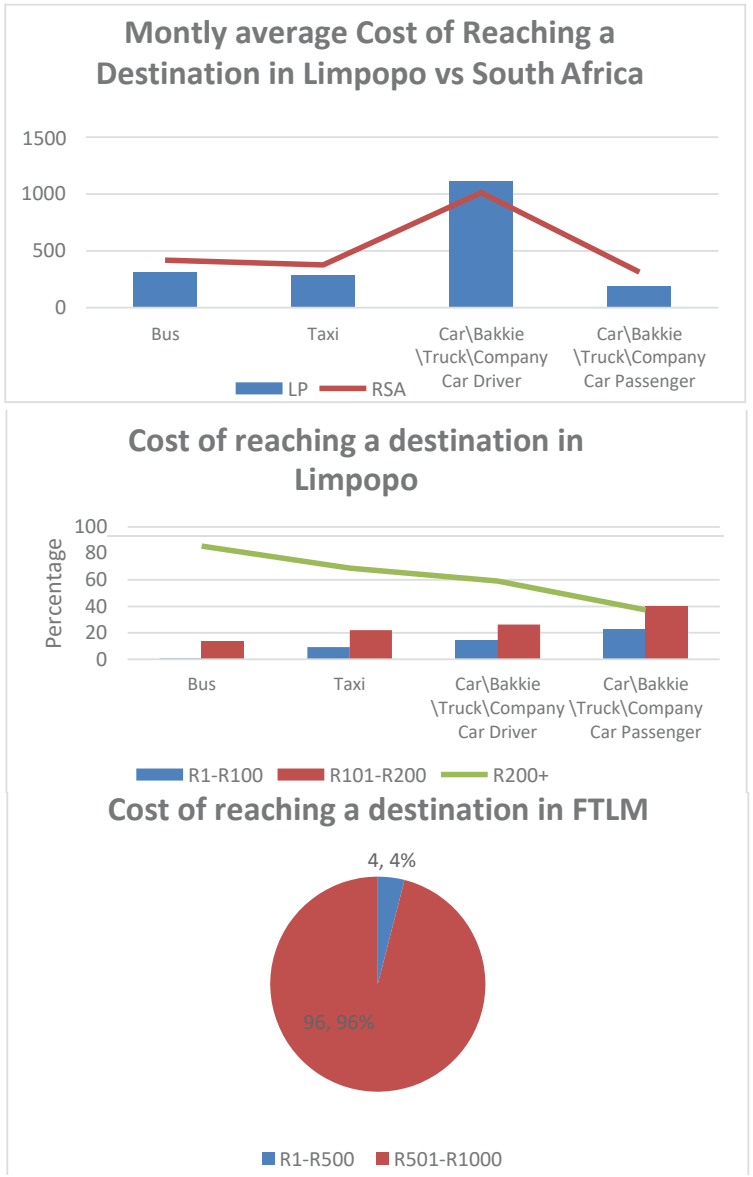


Figure 8.1: Monthly Average Cost of Reaching Destination

8.3 The Demand for Travel

An idea of demand for travel is given by travel journeys. In other words, where people want to go, how they get there and why they choose to go there all produce the demand to travel. Put differently, transport is a means to an end—not an end in itself. The demand for travel comes from the demand for other things (i.e. going to work or shopping) not to travel. We manage travel because the transport system (i.e. roads, railways) has a limited capacity. When that capacity is reached, like there are many vehicles on a road, congestion is created and the drivers (users) cannot reach their destination within a reasonable time. This happens in public transport when there is overcrowding: too many people who demand to travel and limited capacity (few seats). It also happens in urban logistics when there are so many trucks using the road infrastructure that they begin to push road maintenance costs up, and cause congestion in the CBDs.

8.4 Main Trip Purpose in FTLM

There is however a more diverse picture of trip purposes between the Local Municipalities, where FTLM has most trip purposes around shopping activities.

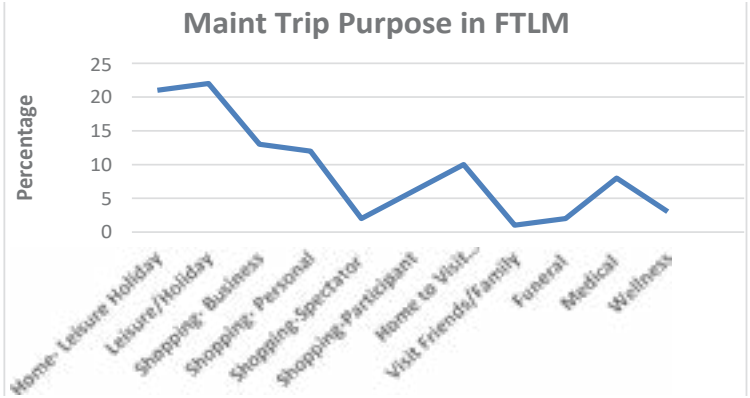


Figure 8.2: Main Trip Purpose, FTLM

On individual activities most people seem to travel for the purpose of Leisure or Holiday in FTLM. Nevertheless, this ITP is based on the assumption that each district municipality will over time have similar travel patterns in the Limpopo Province in general. In other words, the residents in FTLM trip purposes should at some point become similar to the average trip purposes in the Limpopo Province. The planning in the area should, therefore, reflect the possibility of some (not all) trip purposes, given that there are supporting mechanisms (i.e. land-use development in line with the Provincial trends) that are more in line with the Integrated Development Plan.

8.5 Modal Split by Income Level

The second aspect to consider is the concept that travel takes place within some type of vehicle technology (i.e. transport modes). A general expectation is that different types of users use different transport modes for the same purpose. Users can be categorized by income, transport modes are categorized by their type (i.e. public transport, non-motorized transport and private transport). In this section users are categorized by income group. Within the context of this integrated planning research study, these income groups are often referred to as "income quintiles" (NHTS, 2013). These terms are used interchangeably. This section presents modal splits for work and education trip purposes per income quintile in FTLM.

8.6 Work Trips

Figure 8.3 reveals that each income level is composed of different combinations of transport modes. This suggests that walking is a prominent mode in FTLM since it is at no point below 20% of the modal split per income level. It be that the manner in which land is used, and work locations are placed, enables or encourages non-motorized trips to take place from home to work.

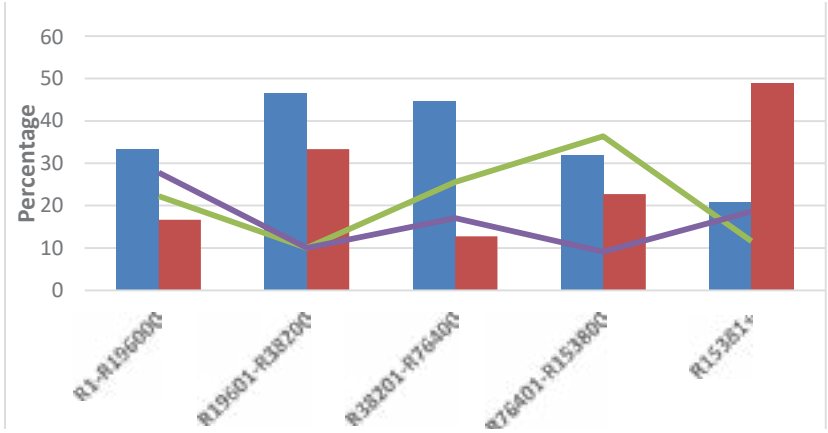


Figure 8.3 Work Trips in FTLM

8.7 Transport for Special Category Transport Users

In terms of public transport (bus and taxi), the modal split generally declines as incomes increase. Taxis, interestingly emerge as a majority share in the upper-middle income level, and have the least dominance in the lowest income group. In the highest income level, walking is still present and the private car usage is the most dominant transport mode of choice

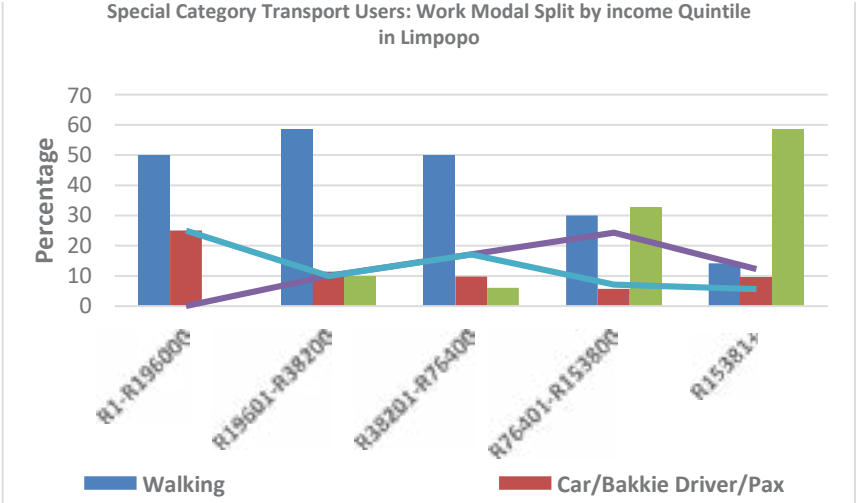


Figure 8.4 Work Trips for Special Category Transport Users in Limpopo

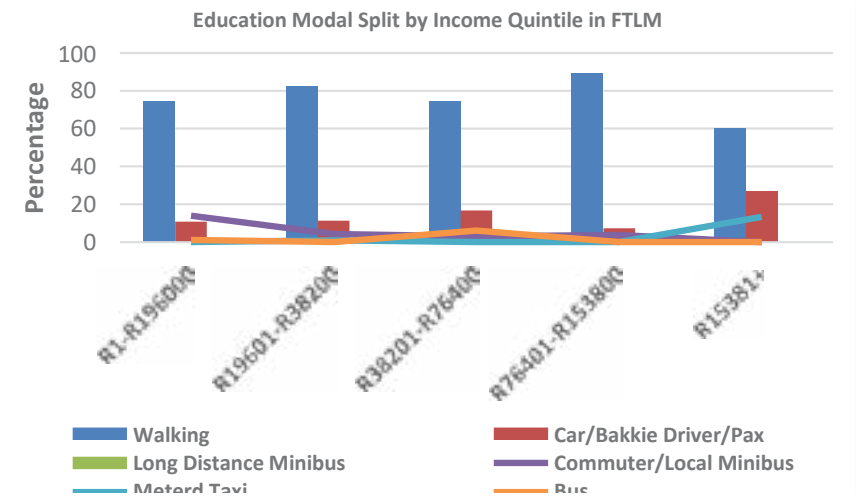


Figure 8.5: Education Trips in FTLM

The National Household Travel Data does not provide a sample size suitable for analyzing trips by special categories of passengers in FTLM. Therefore, Figure 8.4 presents a summary of the prevalent modal split in the Limpopo Province: under the premise that Sekhukhune District patterns return to the average behavior found in the Province. From Figure 8.4 it appears that persons with disabilities walk more in lowest to middle income levels. Whilst higher income groups begin to use cars, public transport only surfaces significantly in the middle and upper-middle income levels, although bus services are evident in the lowest income levels. From the results above, public transport services are not equitably available (from a cost point of view) to people with disabilities. It is however notable that walking dominates, and this puts pressure on local area planning frameworks and projects that advocate for universal access. Furthermore, the dominance of car drivers in the highest income level suggests that modified vehicles, or driver training for persons with disabilities is not accessible to lower income groups.

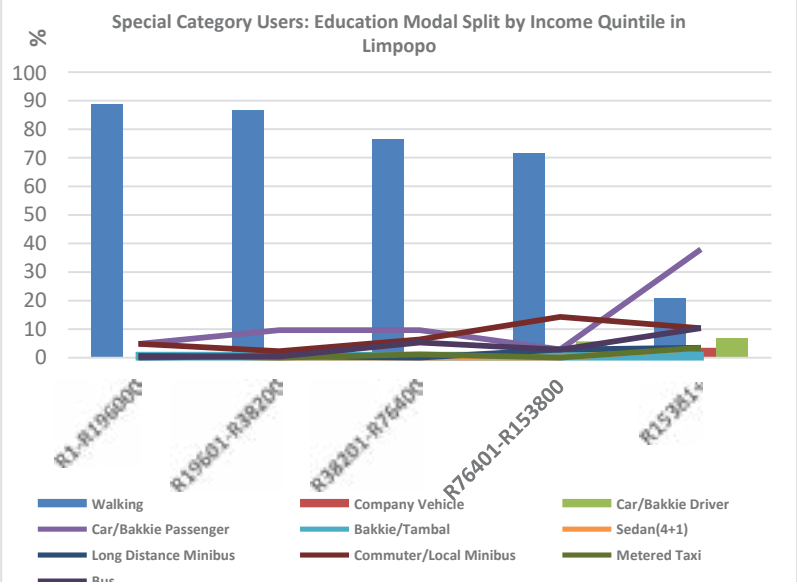
8.8 Education Trips

With comparison to work trips, the modal split for education trips has a much larger set of options in FTLM. What has remained profoundly significant is the dominance of scholars who walk to an education Centre. The key question here then is what kind of walking facilities are there? Are the investments in walking facilities, especially along school routes, reflective of the mode's dominance?

The private car share makes clear sense. Most learners tend to be passengers in their parents' travel on a daily basis. Public transport (long distance taxis) is only evident where income is very low.

8.9 Education Trips for Special Category Transport Users

For special categories of passenger's education trips become slightly more complex. Walking dominates the mode split, and decreases as income quintiles increase. Car trips (car driver and passenger) come up as dominant in the highest income group. The commuter/local minibus also only starts gaining dominance, as incomes are higher. All the transport modes are used in the highest income group. This further confirms the fact that public transport systems do not seem to be accessible to people in the lowest income group.



igure 8.4 Work Trips for Special Category Transport Users in Limpopo

8.9.1 Access to First Mode of Transport

Accessibility and proximity are key supply side indicators of transport services in an area. Accessibility measures how much effort people must exert in order to go somewhere. That effort may be cost and, or time- for example. Proximity measures how close a place is to the majority. This section reflects on:

a) walking to the first mode of transport;
b) waiting for the first mode; and
c) Reaching the destination from the public transport stop station as measures of public transport accessibility.

The focus is on access to education trips and work trips for the entire FTLM population sample in the NHTS of 2013.

8.9.2 Education

Most education trips are accessible within 0-9 minutes for each access leg (a, b and c). Commuter taxis are accessed in all time segments according to Figure 8.7. This can be attributed to the prominence of the mode, as noted in earlier sections. Of interest is the increasing share of bus inaccessibility as the access time

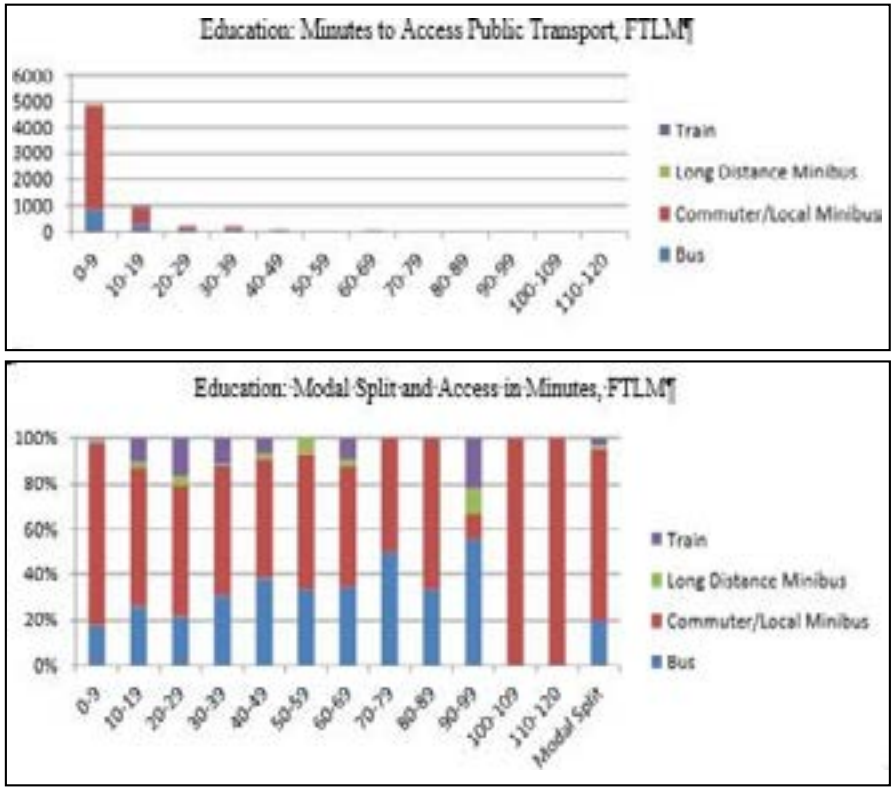


Figure 8.7: Access to Education in FTLM

increases. Buses are thus the most inaccessible, whilst taxis seem to be easily accessed for education trips. This is a challenging conclusion because one expects to find that scheduled trips are much easier to access that unscheduled trips. It seems however that taxi routes penetrate deeper than the scheduled bus services in the FTLM

—especially for education trips.

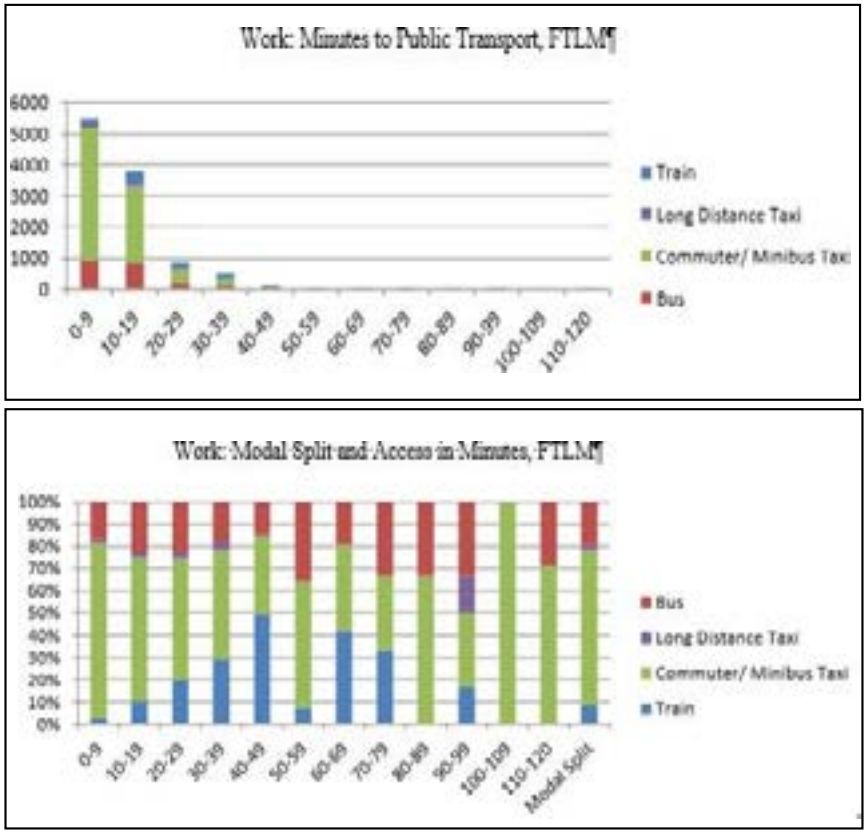


Figure 8.8: Access to Work in FTLM

A similar distribution is notable in Figure 8.8, as with education trips, where most of the access times incurred are between 0-9 minutes and 10-19 minutes. Minibus taxis are the most accessible mode between 0 and 39 minutes. There are people who indicated that they travel by train, and the train is mostly accessible within 40-49 minutes. If there is no train in the area, then these responses suggest that people being interviewed may have not understood the question— and a more accurate local based survey needs to be conducted. Bus services, for work trips are much more stable, and are present in almost all access time scales. The stability of scheduled services in the work trip context may be attributed to where and how working populations locate themselves. It may be that residences with the highest working populations are located closer, or along major bus routes. Taxis are traditionally very permeable in the low density networks that describe rural mobility. Thus it is within reason to find their presence so evident in the above results.

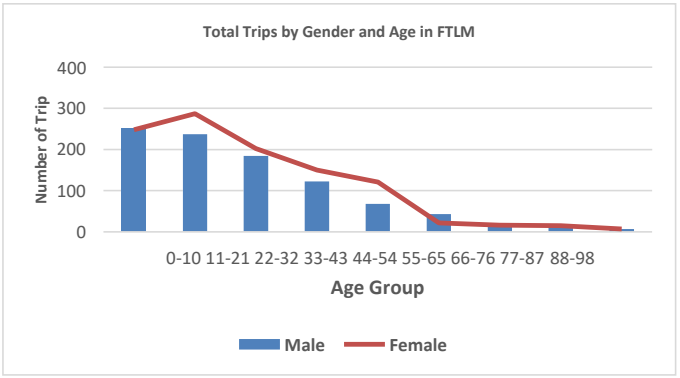


Figure 8.9 Total Trips in FTLM

Trips are generated by the need to travel, and considered before or after (a) a mode of choice is on the Table and (b) the cost of access and egress are considered. In Figure 8.9, the total trips generated by gender and age group are presented. Most trips are generated by 11-21-year-old females; the least trips are generated by elderly groups (88-98 years of age). The manner in which trips are distributed is consistent between genders: younger populations generate more trips in total, and beyond the 21stBirthday, populations begin to produce fewer trips in general.

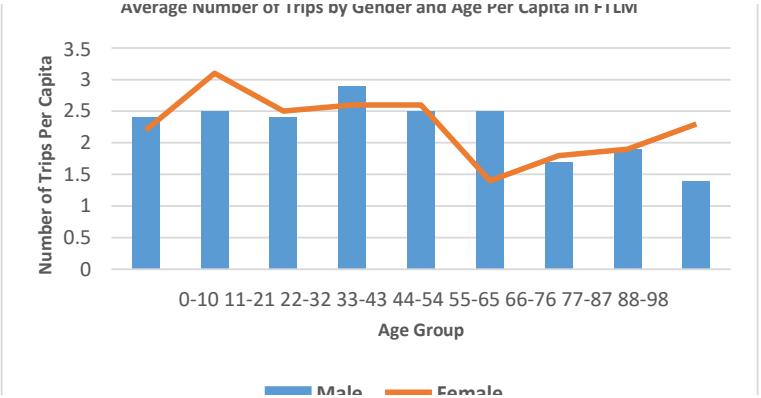


Figure 8.10 Average Trips Per Capita in FTLM

When we consider total trips generated, we are only considering the sum of all trips by age group. If one age group has a larger population, then the results will obviously be misleading. Figure 8.10 presents the average number of trips per capita generated within certain age groups. The results suggest that most age groups at least generate 1, and less than 3, trips per day. 33-43-year-old men seem to generate

the most trips; 55-65-year-old women seem to generate the least. Both genders seem to on average generate 2.5 trips per person per age group. From the age and gender based discussions, activities associated with certain age groups need to be best prepared for the number and intensity of the trips generated and produced toward that activity center/location.

8.11 Trips Generated by Settlement Type

The different types of settlements lead to different types of travel patterns, and behavior. This section examines the trips generated by settlement type by public transport mode. As depicted by Figure 8.11 most education trips are conducted by Minibus (77.8% in rural areas and 68.2% in urban areas), work trips are however predominantly made by Bus (39.1% in urban areas and 38.3% rural areas).

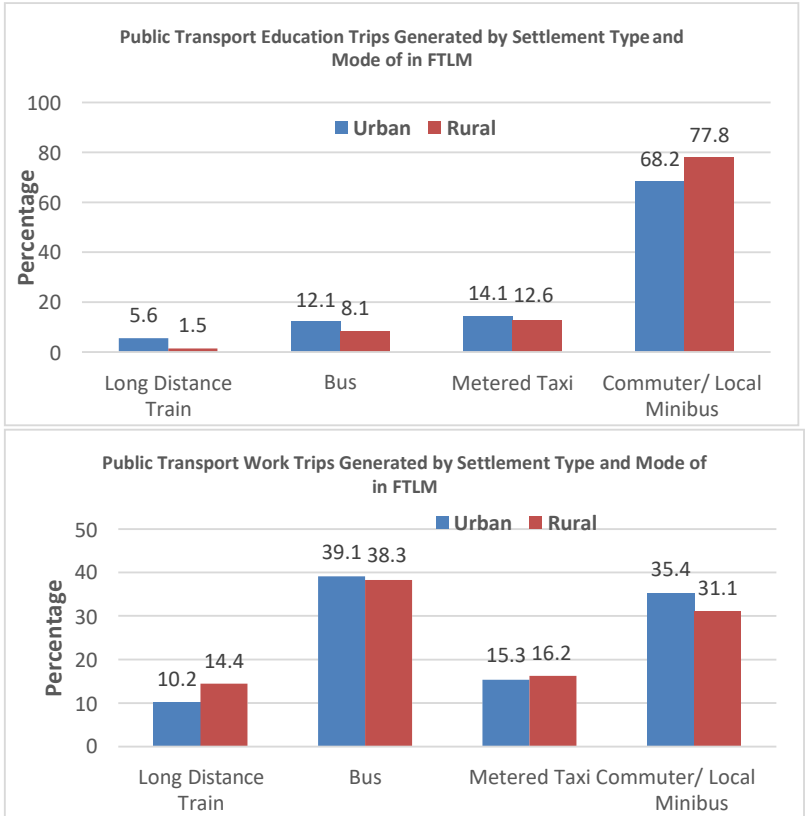


Figure 8.11: Education & Work Trips by Settlement Type in FTLM

In a Province level, minibus taxis enable the commuters to work in rural areas (42.9% of trips in the settlement type), and Buses dominate the urban work commute (56.1%) for special categories of passengers as shown in Figure 8.12. Education trips are predominantly made by Local Minibus taxis, nearly 83.9% of trips in the rural area, and 52.3% in urban areas

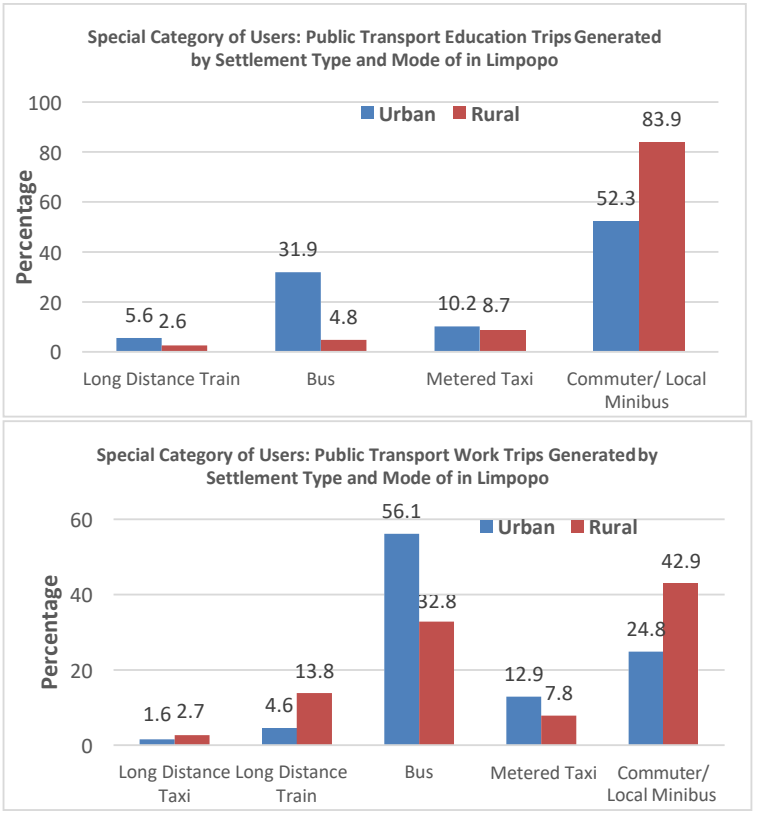


Figure 8.11: Education and Work Trips for Special Categories of Transport Users

8.12 Summary Travel Behaviour Pattern in FTLM

This fact sheet is an analysis of the economic, access and travel demographic data of FTLM based on the 2013 Household Travel Survey Data. It covers work, education and travel behaviours of special categories of users.
The sheet is divided between:

- Cost, Expense and Purpose
- Access to the First Mode
- Trip Generation

Since the Household travel survey is an aggregate survey, aspects such as busiest day of the week, or traffic volumes in a certain road way could not be determined. In addition, there were only 10 surveyed people with disabilities in FTLM. This Integrated Transport Plan uses the Provincial estimates for their travel behavior finally, a major assumption here is that local areas aim to align themselves with the Provincial trends. This may not consistently be the case. In the bigger scheme, however, it seems essential to note that future trends may lean closer towards the Provincial aggregate.

8.12.1 Key Findings

- Although the cost of travel throughout Limpopo Province is no more than R500 (per trip to destination), FTLM reveals a starkly different composition of trip purposes than the Province.
- Education trips have more modal diversity than work trips: although walking dominates the modal split.
- Work trips are surprising when access times to cars are high: one may suggest that car ridesharing behavior is already taking place.
- High income special category transport users have a much larger range of modal options than those with lower income. Walking mode split is inversely related to income.
- Much of the travel generated is rural, in volume and appears to be urban in destination. This is an uncertainty since O/D (origin-destination) data is not yet available.
- Overall, much of the travel in the FTLM takes place on foot, by bus or minibus.
- Higher income groups are mobile through cars and other private options.
- Finally, there is room for public transport to serve as a catalyst in enhancing rural-urban accessibility improving the levels of existing services.

8.12.2 Conclusion: Aligning with the National Transport Policy

This chapter set out to diagnose the travel patterns in the FTLM. The data was based on the National Household Travel Survey of 2013, and processed to present the results above. The sample size is rather small since the data was collected for a national survey, hence one key point of note is that the results are highly aggregate.

The data presented here intimated that scheduled services struggle to capture the work, education and special category trips. Unscheduled services seem to penetrate, capture and retain markets consistently—and are able to present the greatest level of access and appear significantly even in view of the various settlement types.

The key limitations of these results are that some aspects of the data are inconsistent due to:

a) the data is over aggregate; and

b) the sample size for people with disabilities for FTLM is statistically insignificant.

In terms of cost of travel and main purpose, FTLM was largely unique from other Local Municipalities. It appeared to be without significant consumption purposed trips (i.e. shopping), and costs per trip were below R500. On a weekly basis, however, the costs would be significantly high, nearing R 2 500, in extreme cases. Thus, a key issue is reducing the most extreme cases in the transport sector.

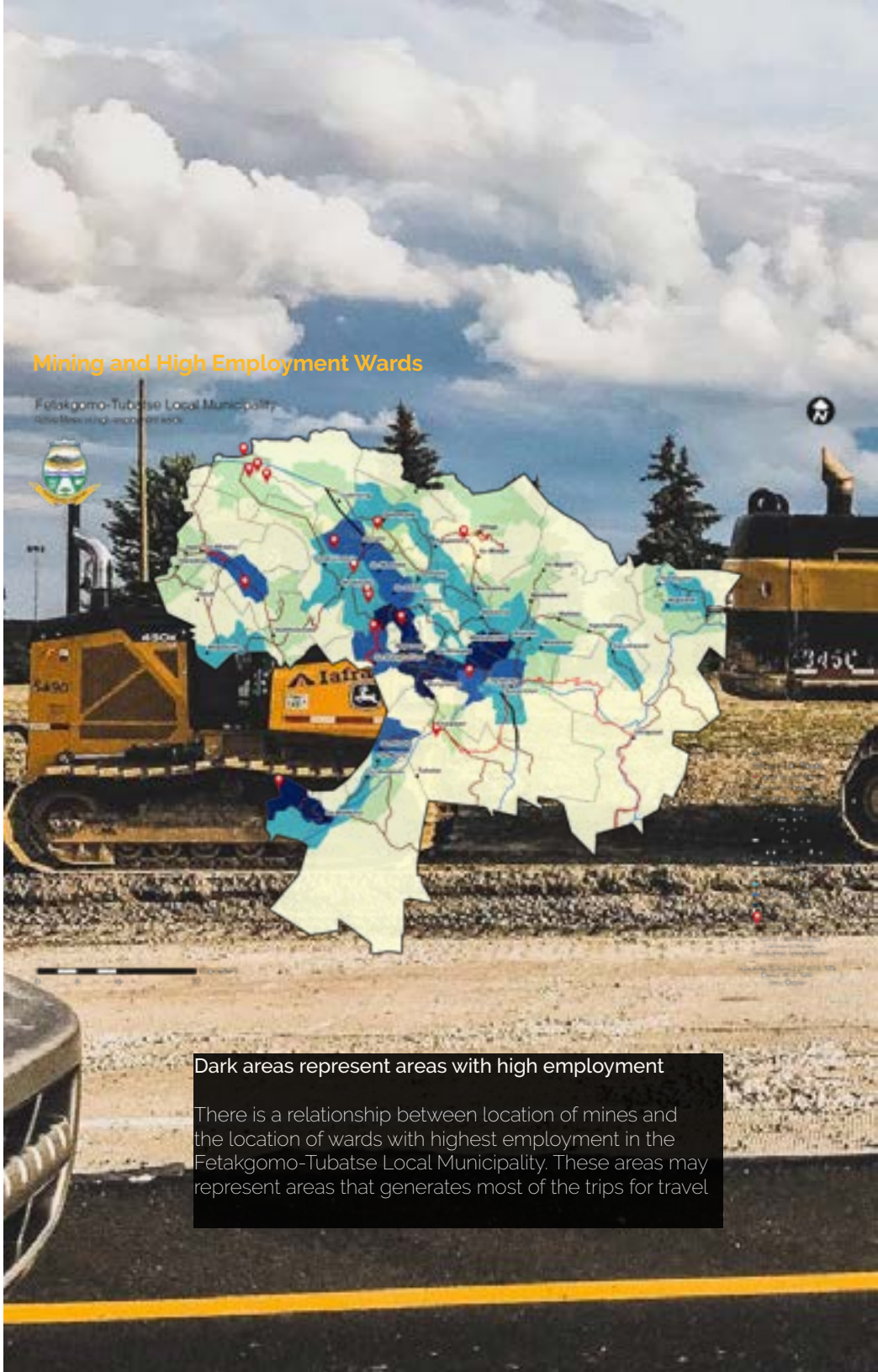
The modal split by income section reflected on the municipal sphere of government's responsibility for "encouraging and promoting the optimal use of the available travel modes so as to enhance the effectiveness of the transport system and reduce travelling time and costs." The results suggest that modal splits vary by income quintile, and walking is present throughout, and private cars dominate the highest income quintile. Optimally using available travel modes implies the commensurate allocation of resources. Therefore, investing in non- motorized facilities to the degree that they are present in the area would make a significant impact.

The access to first mode of public transport section addresses the responsibility for "the planning, implementation and management of modally integrated public transport networks and travel corridors for transport within the municipal area and lasing in that regard with neighboring municipalities." The results suggest that scheduled services are largely inaccessible, and have high vehicle capacity— without the support of high scheduling and network capacity. Whereas unscheduled services with low vehicle capacity, seem to penetrate deeply into the rural areas and present high system-wide capacities (i.e. network coverage and frequency). Thus, integrating the two types of services would enable largely more efficient services at the cost of an additional transfer time. Alternatively, operating them in silos may produce transit services that run in parallel and compete sub-optimally for both operators and users.

8.12.3 Trip generation by age and gender

Where the NLTA states that " the municipal sphere of government is responsible for marketing and promoting publicity associated with the public transport system" it seems reasonable to attend not only to transit service levels from the gender, and settlement type parameters, but it is also essential to communicate the benefits of efficient public transport to the right target market. By age group, the best ages are between 10-21 years. That is where most total trips take place, and it is room to present a culture for public transport and non-motorised travel in the longer term. This goes hand in hand with "providing information to users or potential users of public transport".

Finally, this chapter enables the FTLM to be more responsible for "ensuring that there is provision for the needs of special categories of passengers in planning and providing public transport infrastructure facilities and services to meet their needs, in so far as possible the system provided to mainstream public transport." Going forward, a much more local level study would equip the Local Municipality with the necessary tools to develop a Local Area Transport Framework that accounts for both passenger and freight transport services in rural area contexts.

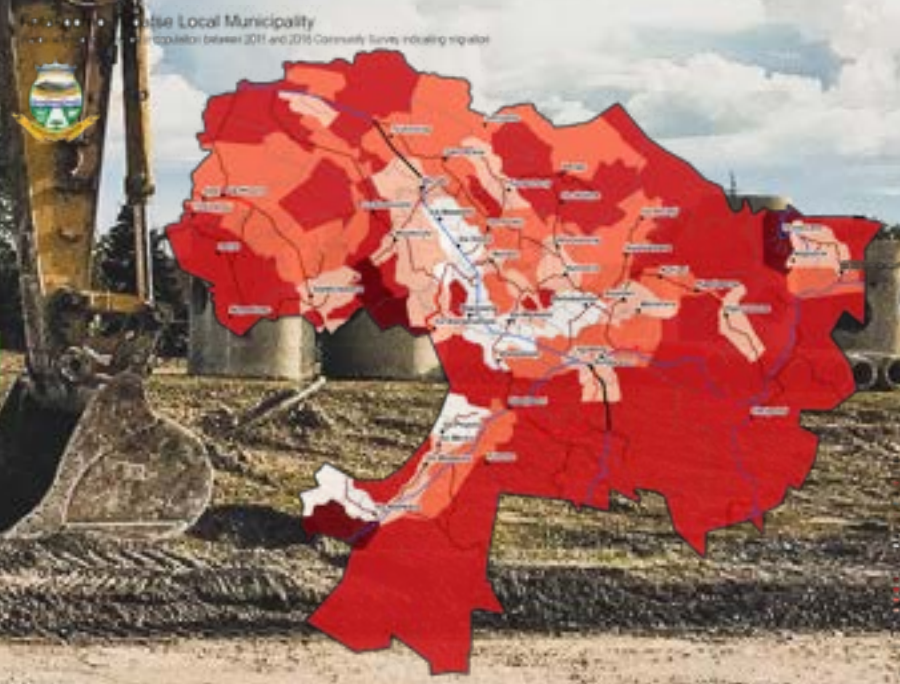


Largest Households

Dark areas represent areas larger households

Larger households are mostly in semi-rural and urban areas connected via the main road networks in contrast to the majority of rural villages.

Migration (Between 2011 and 2016)



Lighter areas represent areas with a high influx of people miving in. Darker areas represent areas where there is a decrease in population

There is a relationship between location of mines and the location of wards with highest employment in the Fetakgomo-Tubatse Local Municipality. These areas may represent areas that generates most of the trips for travel

Chapter Nine

9. FREIGHT LOGISTICS STRATEGY

9.1 Freight Objectives in FTLM

A fundamental prerequisite for economic growth and trade expansion in South Africa is its transportation system that enables the exploitation and development of natural and human resources, movement of goods and services to their destination in a reliable, speed, safe, efficient and affordable fashion. Thus, an integrated transportation system becomes prerequisite in order to realize competitive, sound, healthy and sustainable economy in South Africa.

Logistic inefficiencies severely retard competitiveness and as a result encourage the transfer of economic activity to more favorable locations while enhancing supply chains that is favorable for success in global markets. Transportation of freight is a vital element in planning for sustainable prosperous nation. The overarching objectives of all freight transport are by definition, the economic efficiency of the movement of goods so that freight transport policy and investment is primarily directed at creating conditions that support that objective.

Mining activities in Burgersfort are the catalysts and spine of freight transportation operations over short and long distances. Due to these mining activities that consists amongst others chrome mines, platinum mines, and the smelters this nodal point has been identified as a provincial growth point due to the mining activities in the Limpopo Employment Growth and Development Plan (LEGDP). Most of the freight handling facilities and heavy industrial activity and the rail infrastructure are centered along the Dilokong and Burgersfort- Stoffberg corridors. LEGDP aims to unlock the development potential of this development corridor through the provision of infrastructure by linking it to the rest of the region in terms of both transport and economic activities.

To realize this economic opportunity from transportation planning and systems perspective, it is imperative that FTLM as a Planning Authority to develop an efficient and integrated freight transport system that will ensure regional economic sustainability in pursuant of Section 37(1) of the National Transport Act, Act No. 5, 2009. The region's transportation system requires the optimum integration of the different modes of transport that includes road, rail, aviation, maritime and pipeline with the appropriate modal balances.

This section presents our analysis of freight transportation and mobility in FTLM covering all freight transport infrastructure and freight transport modes including our summary and conclusions.

9.2 Point of Departure: Freight Logistics Strategy (2006)

Policy framework pertaining Freight Logistics Strategy (FLS) (2006) and other applicable polices and legislative tools relevant to freight transport have been outlined in Chapter 1 and 2. The FLS vision and objectives should be filtered down to the Limpopo Province and further down to the FTLM. FTLM does not have a comprehensive freight policy framework and/or plan, and this document has to formulate.

National Freight Logistics Strategy (2006) vision and objectives	Limpopo Freight related objectives and mission
Vision *"To provide safe, reliable, effective, efficient and fully integrated land freight transport operations and infrastructure which best meet the needs customers at improving levels of service at an equitable cost in a fashion which supports government strategies for economic and social development while being environmentally and economically sustainable."* Objectives: • Re-evaluation of the role of freight transport in economic development; • Lower transport costs; • Efficient transport systems; • Infrastructure development; • Promotion of BEE; • Safety of goods in transit; • Development of strategic transportation corridors; • Promotion of inter- modalism; • Reduction of control overloading; • Promotion of Small Medium and Micro Enterprises (SMMEs); • Removal of infrastructural bottlenecks; and • Trade facilitation and co- ordination.	• Ensure that freight transport infrastructure planning is integrated with land use in accordance with the requirements of the SLUMA 2013 • Ensure an effective and efficient integrated freight transport system for the Limpopo Province • Ensure proper consultation with neighboring provinces and countries concerning cross border traffic and the regulation there-of. • Regulate operator fitness and overloading through the Road Traffic Act and the RTQS • Improve road safety by initiating measures to regulate driving hours • Encourage SMME"s to enter the freight transport industry • Encourage basic and management training in freight transport and logistic • Ensure a freight transport climate or environment that is conducive to meeting customer needs and expectations • Ensure accessibility of freight vehicles to customer premises • Provision of a freight transport system that is responsive to changes in customer demands, logistical developments and market forces • Encourage provision and establishment of suitable infrastructure for intermodal exchange and for logistics services • Utilise modes so that each mode (road, rail, pipelines and air) is used for circumstances it is economically and practically best suited for. • Level playing fields between modes to effect the optimal use of scarce resources • Remove unfair financial inequities towards freight transport operators where these prove to exist • All modes of freight transport to be afforded equal opportunity in the market • As far as possible road users should pay the full cost of road infrastructure through appropriate fuel levies, license fees, toll fees or other user charging mechanisms • Ensure optimum utilisation of existing rail infrastructure and operations • Discourage overloading of road vehicles since it causes damage to roads leading to a sub-optimal use of scarce resources • Promote corridor development • Assess the environmental impact of transport activities on the economy and quality of life • Minimise air and noise pollution • Minimise the effect of freight transport on traffic congestion • Minimise the effect of transport on the natural environment • Promote foreign trade, particularly with SADC countries to enhance economic development.

Table 9.1: Frieght Logistics Policy Framework for FTLM

9.3 Freight Logistics Status quo

Nationally, rail was one of the biggest anchors and catalysts of freight transport until 1988. The development of the railway in South Africa led to the promotion of major development projects at and around stations, especially in CBDs and industrial activity. The deregulation of freight transport in 1988 immensely changed freight transport from a rail based transport system to a road based transport system. Figure 9.1 depicts that in 2013 only 12.1% of total freight was on rail but 30.5% of tonne-km was on rail. Figure 9.1 further reveals that 74% (789mt and 496mt) of road freight are within the metropolitan and rural areas where short distance haulage will be found.

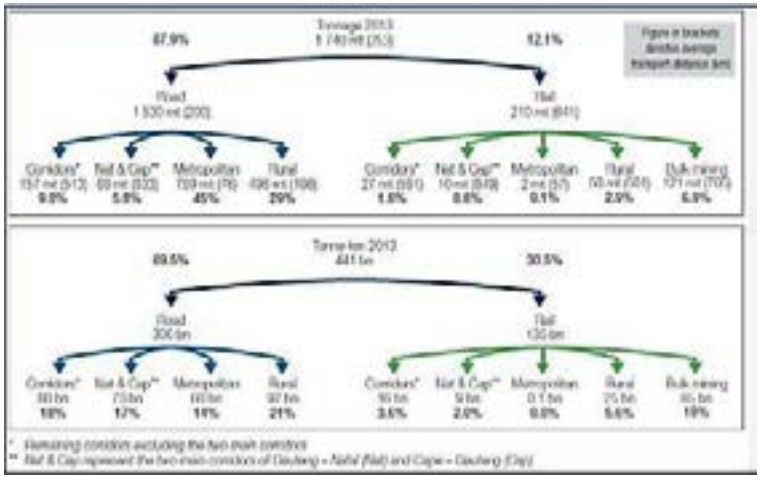


Figure 9.1: Road and Rail Freight Volumes for 2013
Source: 10th State of Logistic Survey for South Africa (2013)

State of Logistics data on freight transport system indicated in Figure 9.2 points out that 58.8% of the total logistic cost is transport related. The biggest contributors to transport cost are fuel, maintenance and wages. Dwelling time as a result of congestion on roads, standing time at warehouses and slow movement in the CBD (e.g. R37 in Burgersfort) are not directly measured but is reflected in fuel price, investment cost, and wages.

Figure 9.2: South Africa's Logistics Cost Components and GDP Comparison
Source: 10th State of Logistic Survey for South Africa (2013)

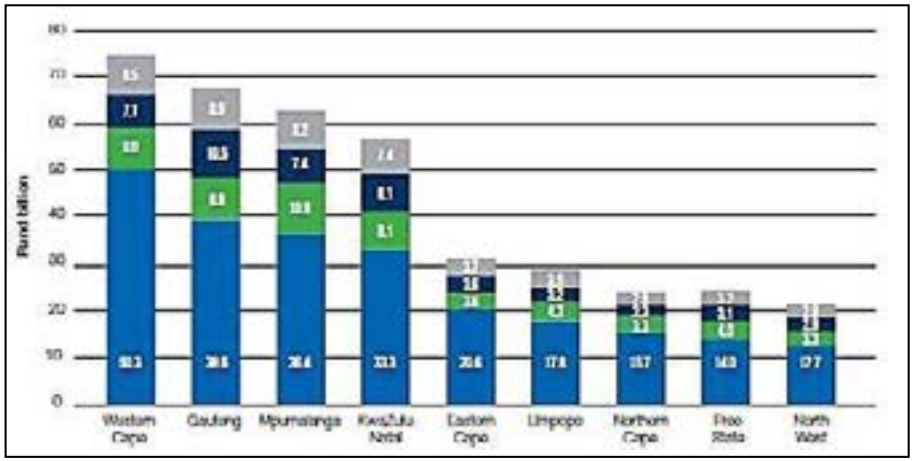


Figure 9.3: Provincial logistics costs, 2013
Source: 10th State of Logistic Survey for South Africa (2013)

State of Logistics data on freight transport system indicated in Figure 9.2 points out that 58.8% of the total logistic cost is transport related. The biggest contributors to transport cost are fuel, maintenance and wages. Dwelling time as a result of congestion on roads, standing time at warehouses and slow movement in the CBD (e.g. R37 in Burgersfort) are not directly measured but is reflected in fuel price, investment cost, and wages. Figure 9.3, illustrates the freight logistics costs comparison per province. According to the 10th Annual State of Logistics for South Africa, between 2011 and 2012 there was not much change in the ratio of these costs. Out of the logistics cost incurred in South Africa, over 65% is incurred by the following provinces: Western Cape, Gauteng, Mpumalanga and KwaZulu-Natal. The Western Cape incurs most costs as it ships many tons to Gauteng and ships many tons from Gauteng and other provinces. Gauteng has a large consumer population that requires many tons shipped from the coastlines. Mpumalanga ships millions of tonnes of coal and agricultural goods. KwaZulu-Natal also ship great volumes to Gauteng, albeit over shorter distances than the Western Cape. The remainder of the provinces does not, proportionately, generate as much freight activity.

The logistics costs in North West Province is the lowest of all provinces due to the bulk of the commodities being transported by rail, with a relative short haulage from the mines to the rail sidings. Rustenburg also carries a high volume of transit traffic to Botswana which is reflected in the transport cost of 12.7%. In the Limpopo Province, with the development of Waterberg Coalfield in Lephalale and other mining and agricultural activity within the provinces, it should expect an increase in the shipment cost.

9.4 Freight Landscape in FTLM

The economic growth of FTLM is mainly built around the mining industry which represents the bulk of freight in the precinct. The freight consists of:

- Bulk materials for the export markets
- Bulk materials imported to the mines
- Bulk liquid to the mines and Burgersfort
- Industrial freight (spares, machinery to the mines, bricks, stone, etc.);
- Agricultural products
- Fast moving consumer goods (FMCG)
- Manufactured goods;
- Transit or through traffic between and/or in the road network as presented and summarized Table 1.7 and Table 3.18 in this document..

The above freight flows can further be unpacked in different commodity groups namely:

- Bulk Materials
- Break bulk

- Fuel and petroleum; and
- Containerised freight.

Table 9.2 illustrates the different commodity groups and types.

Commodity group	Commodity type
Bulk materials Mines	Minerals (Chrome, Platinum) Coal imports to furnaces Granite Bulk cement
Break bulk	Building industry Industrial freight (equipment and spares to mines, bricks, stone, etc.)
	Bagged cement Light industrial and small scale manufacturing Agricultural products Fresh products
Fuel and petroleum	Diesel to the mines Chemicals to the mines Local consumption and industry
Containers	Fast moving consumer goods High value goods Food and processed foods

Table 9.2: Commodity Groups and Commodity types

9.4 FTLM Freight Logistic Needs Assessment

9.4.1 Road Freight Network

The FTLM road network has a less comprehensive network and it comprises of municipal, provincial and national roads. The majority of the heavy freight movements originate from the FTLM due to the mining activities taking place. In addition, there is a fair volume of other freight movements coming to the FTLM areas. All the roads freight corridors traversing the FTLM still need to be established. The main road freight corridors are:

1. Dilokong corridor – Route R37

The Dilokong Corridor comprise of the route R37 from Polokwane to Lydenburg, The section of the Dilokong corridor running through FTLM is expected to attract mining related industry, retail and service businesses, medium density housing, higher order social activities, etc., concentrated in settlements like Mecklenburg, Driekop, Riba Cross, and Burgersfort.

2. Burgersfort Stoffberg corridor – Route R555

This corridor runs from Burgersfort via Steelpoort to Stoffberg along the route R555. Along this corridor, there are a substantial number of mines and related heavy engineering activities taking place. Hence, the corridor plays an important role in the development of the mining industry. The further development of this corridor will increase economic development of the areas surrounding the corridor, particularly the linear settlements along the R555 and Steelpoort River.

3. Mining belt

The Eastern limb of the Bushveld Igneous Complex (mining belt) is emerging as important structuring element of the municipality's spatial development, which will be increasingly dominant in future. The mining activities will affect mainly the western quadrant of the municipality. It is envisaged that retail and service businesses will respond to the opening of mines and the development of housing by also locating closer to these areas. In time, this may eventually alter the current fragmented spatial pattern by creating few large urban settlements, if the expected scale of mining activities materialises. Some of the key issues identified and should be considered when planning for the road freight routes are:

- Issues in relation to the size of freight vehicles,
- Congestion caused by freight traffic,
- The management of freight vehicle on the road network,
- Appropriateness of the road network geometry to deal with freight movements and congestion,
- Pavement damage due to freight operations, law enforcement with respect to overloading and illegal use of loading bays
- Weighbridge locations, procedures, jurisdiction and ease of avoidance of testing needs to be reviewed.

In addition to the above, the National Road Traffic Act 93 of 1996 requires the implementation of a Road Transport Quality System (RTQS). A system such as this would address the items such as a vehicle quality control through a system of testing station accreditation and road side inspections, driver quality control via the professional driver permit, overload control as well as regulations regarding the transport of dangerous goods.

Map 9.1 illustrates the main freight road network in the Burgersfort area which carries the following types of freight transport as classified by Road and Stormwater Master Plan 2020. This are:

- Light vehicles (pickups etc.)
- Heavy vehicles
- Very heavy vehicles (with 5 and more axles per vehicle).

Map 9.1 also illustrates Transnet's freight network running through the Burgersfort areas linking the mines

- Road Agency Limpopo – indicated in the Road and Stormwater Master Plan t hat its currently populating traffic data
- SDM and FTLM – GIS data of all roads
- Marumo Consulting Engineers appointed by the FTLM to prepare Road and Stormwater Master Plan on the 31st May 2018
- SHCE – manual traffic counts data

9.4.1.1 Traffic Flow on Road Network

9.4.2 Rail Freight Network

Bulk minerals are mainly linked to the mines with rail infrastructure to export (e.g. chrome) but also to import products for the furnaces. It can therefore be considered as the main freight generator in the region.

The rail freight network falls under the jurisdiction of Transnet Freight Rail. The lines found in FTLM is the feeder line to the Limpopo North- Eastern system and its function is to transport the chrome minerals from Steelpoort Station and in addition, to import fuel to Ohrigstad Station.

The Dilokong Corridor between Polokwane and Burgersfort is characteriseda by significant deposits of high-value Platinum minerals. With the prospect of building a Platinum smelter in the FTLM region, once these minerals are processed they are not necessarily going to be rail-friendly commodities. Based on the input of stakeholders involved in the production and development activities along this corridor, the type and quantity of commodities generated by the platinum mining industry in this area could not provide supplementary demand for rail transport should the railway line be utilized.

In addition, according to the Transnet Long-term Planning Framework (LTPF) there are no prospects of freight rail interventions identified as being required or planned in this municipality.

9.4.3 Pipelines

The Olifants River Water Resources Development Project (ORWRDP) will supply water through pipeline for domestic and industrial (mining) use in the Limpopo Province, which form part of Economic Development Strategy. The infrastructure development in the province will consist of building of a dam at De Hoop farm and the Flag Boshielo Dam. In addition, a pipeline and associated pump stations' from the De Hoop along the mining rim to Atok / Bokoni Platinum Mine.

9.4.4 Freight Ring Roads

Many road freight journeys start and finish on suburban streets in heavily congested areas. FTLM has to consider construction of freight ring roads to decrease the dynamism of central areas. This will encourage emergence of peripheral centers that are gaining from improved accessibility with the construction of ring roads. A freight ring road is said to reduce the travel time since the freight transport can avoid congested areas – as they are bypassed. The peripheral centres can also be warehouse/storage for distribution later through congested areas with smaller freight transport that can navigate the across with faster travel speed.

9.4.4.1 Transport Master Plan

The Transport Master Plan compiled in 2020 by Marumo Consulting Engineers has outlined the rates provisions for (1) road design work,
(2) road construction work and (3) road supervision work. This provisions can guide FTLM in exploring the feasibility of the freight ring road concept in Burgersfort.

9.4.4 Law Enforcement

9.4.4.1 Environmental Issues

Some of the key issues identified and need to be taken into account when planning for the freight vehicles environmental impacts is:

- Encourages the use of energy efficiency freight vehicles with new technologies to accommodate the reduction in energy consumption and emissions.
- Noise emissions from freight operations need to be monitored and reported on to deal with any nuisance from noise in accordance with municipal By-laws.
- A freight vehicle emission testing regime needs to be set up to monitor and regulate emissions in accordance with the municipality's policies/strategies.

9.4.4.2 Economic Issues

Key issues that have to be considered when planning for freight transport:

- There is a need to maximize the economic potential of industrial and agricultural facilities.
- Encourage SMMEs to enter the freight transport industry
- Encourage basic and management training in freight transport and logistics
- Ensure a freight transport climate or environment that is conducive to meeting customer needs and expectations
- Ensure accessibility of freight vehicles to customer premises
- Provision of a freight transport system that is responsive to changes in customer demands, logistical developments and market forces.

9.4.4.3 Social Issues

- The need to improve road safety for all users especially around the carrying of dangerous goods.
- Need to reduce congestion on roads through appropriate delivery times.
- To integrate law enforcement in the FTLM. Specific attention must be given to vehicles that are overloaded and delivering the hazardous materials, as they could have daunting effects should incidents occur.

9.4.4.4 Overloading

In the FTLM, there are no overloading policies or strategy in place. Therefore, overloading is not adequately controlled and it is reported that there is inadequate legal support for enforcement. This situation leads to an abuse of loading limits and will only be discouraged if the probability of being caught is high and the related penalties are high. An amendment to the Road Traffic Act to assign the responsibility of overloading to the consignor, consignee, hauler and drivers may help alleviate the current problems. In addition, the Limpopo Provincial government should assess if there is need for the weighbridge and traffic control facilities along the Dilokong Corridors and Burgersfort-Stoffberg Corridor.

9.4.4.5 Overnight Truck Holding Areas/Freight Centre's/Warehouses

There is a need for such facilities, especially with an expected increase in economic development on the back of mining activities.

9.4.4.6 Movement of Hazardous Materials

The requirement for the transportation of hazardous materials on roads in the province is discussed in detail in Chapter VIII of the National Road Traffic Act, Act 93 of 1996. The legislation is prescriptive regarding the duties of the consignors, consignees and operators of dangerous goods, products and vehicles. Chapter 3 have discussed the status quo of the hazardous materials as their classification according to SANS 10228, however there are still some salient items that still need to be addressed.

A comprehensive list of the hazardous materials entering or leaving the FTLM still need to be compiled. The main commodities that are usually being transported in and around the FTLM may fall into this category are fuels, petrol, LP gas, diesel, industrial gases, agricultural chemicals, explosives, refrigerants, asphalt and primary mining and smelter products. The general movements of these commodities are managed on an ad-hoc basis as there is no specific defined plan for their movement in these municipal areas. Most of the hazardous materials should be well regulated and controlled; however, there is poor regulation of the other classes, mainly chemicals for agriculture, explosives and fuels tankers, although it is virtually impossible and, possibly not necessary to control these as they are usually products whose industries self- regulate effectively.

Despite this, the NLTA prescribes that an Integrated Transport Plan requires the preparation and maintenance of a Hazardous Materials route plan by the responsible authority. This could be a Provincial responsibility in certain areas; however, the FTLM

should formalise a process of preparing a hazardous materials plan in conjunction with all relevant stakeholders, and incorporating goods of various classes in parallel with the preparation of its freight strategy as well as a protocol for those materials it cannot control the movement of. As part of its freight logistic strategy, the FTLM will also review the issuing of permits for transporting and loading / off-loading hazardous material, in particular the transportation of the ferrochrome products by the mining houses in the area. The long term health and environmental impact assessment of this products will have to be understood and regulated. The law enforcement and the penalties for legal operations should be in such a way to deter operators from continuing their illegal and potentially dangerous actions. The FTLM will also undertake a review of By-Laws and regulations in relation to hazardous material and how they effect and control cross-border transport and how well they coordinate with other responsible authorities' regulations or policies.

9.4.4.7 Abnormal Loads

In the FTLM there are quite a number of major mining companies involved in operation, and it is perceived that the mining in the District have not yet reached the production limit. Consequently, a number of new mining developments are expected to take place. This will include the construction of the proposed platinum smelter. With this activities taking place, it can be expected that frequent number of abnormal loads will frequent the Local or District municipality.

The Planning Authorities should accommodate the transportation of abnormal load by creating appropriate routes.

9.4.4.8 Incident Management System

With the movement of the hazardous materials and abnormal loads passing through the area, there should be an Incident Management strategy in place. The Incident Management on land transport should be a component of the Provincial Disaster Management Centre which operates 24 hours. Incident Management System should involve the monitoring of accidents, identification of hazardous location, and management of road traffic at hazardous locations and the implementation of law enforcement programs. The safety of the freight rail regulated by the Railway Safety Regulator which is appointed in terms of the National Railway Safety Regulator Act 16 of 2002. The Railway Safety Regulator is independent from the railway industry, which has appropriate legislative power, enforcement capability and human resource capacity to oversee railway safety. The Railway Safety Regulator has the power to enforce and improve the level of operational safety.

9.5 Operational Aspects

In the FTLM, there are three urban nodes namely; Burgersfort, Steelpoort and Mecklenburg that were classified as provincial and district growth points in terms of the Limpopo Spatial Rationale 2002. Steelpoort town is mainly an industrial town that has attracted heavy engineering enterprises; suppliers to the mines; transport facilities; building material suppliers; distributors/ wholesale and non-industrial uses in the area. There are two industrial parks found in Steelpoort, that are almost exclusively depends on serving the mines. A number of heavy engineering and light manufacturing industries such as suppliers of explosives, tyres, hydraulic hoses and pumps, auto- electrical, diesel engines, generators and compressors, tools and earth moving plants, waterproofing and rubber-lining, steel fabricators, lifting/rigging equipment etc. that are located in the two industrial parks found in Steelpoort.

Burgersfort functions as an economic hub of FTLM in terms of retail and personal e.g. restaurants, doctors rooms, furniture shops and business services e.g. banks, printers, estate agent etc. There is a SAMREC Apiesdoring warehouses at northeast part of Burgersfort towards Dresden. Around this warehouse, there is a possibility for the industrial development cluster up to the intersection of R555 and D1253 to Penge and Praktiseer. In certain selected areas up-market housing may also be suitable e.g. motivating medium to high-income areas. Careful attention needs to be devoted to mitigating the negative impacts of incompatible land uses, particularly interfaces where different land uses meet. This may include the selection of exact location/ position of the land uses, access points to development precincts, visual orientation of development pockets etc. These issues however, can be discussed in detail during the township layout design stage.

The business of logistics includes among other things, warehousing, road freighter yards and distribution depots. Within the FTLM, there are a hive of transport activities concerned with the conveyance of goods and services to and from the mines. For that reason, it would be ideal to determine the exact location of the up or downstream warehouses to efficiently supply and distribute goods and services within the municipal area.

9.6 Proposed Freight Logistics Strategy

The following freight strategy / management proposals are identified in terms of fulfilling the vision and goals for FTLM Freight Strategy. They will be detailed further in a more detailed and comprehensive Freight Strategy which will be developed from the broad plans elucidated below.

9.6.1 Institutional Capacity Building

This is currently one of the leading issues in the development community including for the supply of road infrastructure in South Africa. The South African government has acknowledged that there is a need for donors such as the Development Bank of Southern Africa (DBSA) and The World Bank. The Institutional Capacity Building

encompasses three main activities:

- Skill upgrading;
- Procedural improvements; and
- Organizational strengthening.

There is a need to build capacity in supply chain or freight transport related activities within the people of the FTLM. This would serve as an investment in the long term as the skills would be executed to enable the FTLM to accomplish it freight logistics objectives as enunciated in the Limpopo Provincial Policy documents. It is therefore recommended that specific individuals be identified and exposed to appropriate training as this would precipitate more efficient and effective logistics operations within the FTLM area.

9.6.2 Integrated Planning, Information Collection and Forecasting

The South African Department of Transport (DoT) has developed a National Transport Master Plan 2005 – 2050 (NATMAP 2050) which include the objectives for the freight system master plan. At the local government, the FTLM road freight logistics plan, should incorporate both private and public sectors. This needs to be developed within the overall freight strategy master plan document. The integrated freight master plan needs to review, understand and incorporate current and anticipated main intra- and inter-city road freight service type's haulage methods, routes and so on into a strategic freight plan. From this data, layers of services, potential capacities, constraints and planned interventions can be more scientifically determined. It will also enable the formulation of an overarching logistics model/ plan which will require the freight demand and assignment data to be fed into the EMMME (Equilibre Multimodal, Multimodal Equilibrium) or TransCad model. The EMME or TransCad model is a complete travel demand forecasting system for urban, regional and national transportation planning. The services to be captured will include: raw material to processing, consumer goods distribution routes and services, the retail supply chain and, possibly, major domestic delivery/service requirements. The planning authority when developing the integrated freight master plan for the considered the impact of this strategic thrusts (see Table 9.1).

Freight objective	Planning Consideration
Economy	Economic competiveness (e.g., business retention or attraction) Employment retention or expansion Market composition (producers and consumers) User costs (freight transportation and warehousing) Passenger-related economic benefit
Industry logistic pattern	Supply chain structure Regional distribution networks (rural and urban) Mode share (roads, rail, air etc.)
Frieght infrastructure	Multimodal network connectivity Access to existing/ new markets Physical capacity (e.g., lanes, bridges etc.) Operational capacity (e.g., freight throughput as a function of better speed, reliability, information, or change in truck side and weight) corridor chokepoints
Commodity flow	Freight flow by route (long-distance, regional and local deliveries) Commodity movements Mode choice by commodity (including intermodal movements which may utillises highway for a portion of a trip)
Quality of services	Improve speed Enhance reliability (e.g. Maintaining flow along key freight corridors) Driving experience (for freight and passenger vehicles) Enhance system redundancy (choice of route) Cost (tolls, etc.)
Environment	Air quality conformity Communities (e.g.; human environment deliveries, liveability) Land use decisions and vice versa (e.g., location, pattern, sustainable growth) Climate change (e.g., carbon output or infrastructure adaptation) Natural environment (e.g., water quality, soil, wildlife etc.)

Safety and security	Safety Security of critical infrastructure Hazardous materials movement Safe movement of abnormal load Human factors – truck parking

Table 9.1: Integrated freight system planning considerations

9.6.2.1 Intra and Inter Urban Freight Logistics Strategy

Other features that need to be considered when planning for the main intra- and inter-urban road freight service are the complimentary freight service such as the freight centre (e.g. warehouse or distribution centre) and over-night truck holding areas (e.g. truck stops). With expected economic growth around the District municipality, more data will be required to formulate the future road freight network plans. This will be a prerequisite in determining the location of the freight centre or over-night truck holding areas, since most of them are located at the periphery of the town or city.

In addition, the establishment of the freight centre will assist in determining the impact related to changes in strategy such as the reduction of the use of large freight vehicles within certain areas in favour of smaller, more appropriate delivery vehicles; night-time deliveries as an alternative to daytime deliveries and a ban on freight within existing or new residential areas.

9.6.2.2 Inter–Modal Freight Logistics

The nearest inter-modal facility to the FTLM is at Polokwane, and the development of the freight rail between Burgersfort and Polokwane was found to be economically unsustainable. With the existing rail line in FTLM, there is a possibility to improve it for future demand for the freight, better yet to motivate for the creation of inter-modal facility.

9.6.3 The seamless, safe and controlled freight operation strategy

The control of freight operations is primarily to be based on the law enforcement and regulation of the plans prepared for the freight network; the Hazardous Materials Route Map, the Abnormal Loads Route Map and in accordance with a Comprehensive Incident Management Plan, and the enforcement of load restrictions. The following section will deal with the Route Maps, Incident Management Plan and overloading.

9.6.3.1 Hazardous Materials and Abnormal Loads Route Maps strategy

When planning for the freight logistics strategy, the FTLM's Planning Authorities should accommodate the transportation of hazardous materials and abnormal loads through its jurisdiction by way of the following:

a) By-pass or detours for heavy vehicles and hazardous materials;
b) Avoid the transportation of hazardous materials through towns and sensitive areas;
c) Evaluate route plans submitted by operators;
d) To be equipped with an Incident Management System and protocols to respond to incidents involving hazardous goods; and
e) Law enforcement must be knowledgeable with hazardous materials protocols and legislation to manage offenders and incidents involving hazardous materials.

9.6.3.2 Incident management strategy

The main objectives of incident management are to optimize the "golden hour and to prevent secondary incidents. Incident Management on roads is a component of General Disaster Management, and the rail incident management is not the part of it and Rail Safety Regulator regulates it. In most cases, the Disaster Management is coordinated centrally at provincial level. However, the District Municipality does not have a formalized Disaster Management Centre (DMC). A Central Communications Centre (CCC) is therefore required for both road and rail incidents that needs to be reported and responded to. The CCC fall under different authorities and in most cases an Emergency Medical Service (EMS), Police or fire station that operates for 24 hours by functioning as a call centre for emergencies, information, queries, and complaints. The CCC is required to maintain accident data and other incidents, identify hazardous locations (with the data), and develop mitigation measures with the assistance of engineers. Incidents records include accidents and other incidents involving animals, pedestrians, and vehicles.

Incident Management System involves the monitoring of accidents, identification of hazardous locations, management of traffic at hazardous locations, and the implementation of law enforcement programs. A review of these documents should be undertaken to prepare a single over-arching Sekhukhune District-wide Disaster Management Plan, which takes due cognisance of all other plans and other's responsibilities but which effectively simplifies responsibilities and ensures appropriate response with the minimum delay. This review will ensure that all aspects of incident management are addressed, and roles and responsibilities are adequately assigned. To achieve this objective, the FTLM should;

- Obtain data for the different Hazardous materials classes being transported and through this to determine the safest and most functional routes and operating times within the Municipal Area and then publish these for comment so that dangerous goods movement can be regulated and managed (these routes can also be linked to

abnormal load movements);

- Advocate Transport Operator and vehicle compliance with Dangerous Goods Regulations and Standards and ensure that Operators meet the OHS Act and permit requirements;
- Review its Rail Incident Management Plan to ensure that it is coordinate with other appropriate Disaster Management Plans.

The CCC must be equipped with adequate resources to respond to incidents including incidents involving dangerous goods, and to assess proposed routes submitted by the operators, where operators are forwarding abnormal loads and hazardous goods the CCC must be able to intervene effectively. The CDM should consult with the cell/ mobile phone service providers to determine comprehensive cell/mobile phone coverage in the District Municipality (DM), and post emergency numbers such as 10111, 112, and 10177 on road signs at 50 km intervals.

9.6.3.3 Reduction in Traffic Congestion and Environmental Impact

In general, the freight traffic is one of the contributing factors to traffic congestion, especially during the peak hours' periods. But it is also being negatively affected by the current levels of private vehicle congestion, causing travel time delays and increased cost of operations. The proposal were made to be considered regarding a strategy for freight which would include the business case for a shift of freight operations to off-peak hours (mainly, nighttime operations) and also the establishment of the freight centre which would favour the usage of a small freight vehicle over large freight vehicle.

The municipality will also ensure that, wherever it can, paved road infrastructural surfaces will be provided and maintained to reduce noise levels and that their geometrical and operational characteristics correspond to the demands required for the transportation of freight. As for the mining vehicle, an alternative route should be considered that will separate the mining traffic for other traffic. This mining freight vehicle should operate away from the residential area to limit the negative environmental and social impacts. Alternatively to the use of the road freight mining vehicle, mining house could shift into employing the conveyer belt system; this system will work in the same manner as the rail freight system. This system may bring about some benefits in the economy and thus alleviating congestion, traffic conflict and thereby promoting road safety and the environment.

While freight overloading is mainly a Provincial responsibility, the FTLM should assess if there will be a need for the weighbridges within its administrative boundary. The control and management of overloaded vehicles should be enforced. Therefore, the FTLM could consider an agency agreement with the Limpopo Province undertakes to review the following:

- o The proposal of an amendment to the Road Traffic Act to impose stiffer penalties for overloaded vehicles and responsibilities;
- o The provision of weighbridges at appropriate locations and the possibility on employing weigh-in-motion equipment or mobile weighbridges;

In addition to these actions, to control the provision and use of loading bays, the FTLM has to consider preparing a Parking Policy document which should undergo a stakeholder consultation process after its completion.

9.6.3.4 Establishment of a Freight Bypass Road Capacity on the Periphery of Towns

In support to the industrial zones, a freight bypass road is required to get access to these points. Freight bypass road needs to be designed to accommodate the heavy vehicles and abnormal loads while the feeder roads and other road in the CBD's will carry commuter vehicles, public transport vehicles and heavy vehicles with less than 5 axles. This concept will enable heavy freight vehicle to use the freight bypass network as far as possible. This alone will not ensure that freight operators will start using the terminals or freight bypass networks. The strategy is to pull away freight from the densely populated areas or CBD's particularly during peak time. One of the biggest benefits of the freight bypass road along R37 will be at the Burgersfort CBD, where the road is already congested.

9.6.3.5 Prevent damages to the road system

Many of the proposals and strategy action items listed above are planned to address the municipality's desire to reduce the long-term impact of freight on the existing and future road system through demand management, modal shifts and overloading checks. All of these actions will result in a reduced impact on the existing road system.

9.7 Liaison Structures'

The stakeholders in the delivery of the freight logistics system includes:

- South African Department of Transport;
- Limpopo Department of Transport;
- Department of Public Enterprises (DPE)
- Department of Economic Development
- SDM Planning Authority;
- FTLM Planning Authority;
- Transnet Freight Rail;
- Private sectors (Freight logistics industries, road hauliers and freight forwarders);
- Commercial and heavy/mining Industries;
- SANRAL;

- RAL; Local Economic Development

9.8 Implementation Projects and Programme

The project mentioned in this section, if implemented will assist the FTLM in attaining its vision, objectives and goals of being "South African's first democratic platinum city"

1) Institutional Capacity Building

Problem Statement
Nationally, it is widely accepted that there is lack of skilled personnel at all organisational levels. This tends to hamper the performance of freight logistics supply chains. In addition, the FTLM has elicited a need to get support from Province in the management of transportation planning projects. It will be critically important for the FTLM to solicit human capital support from the
Limpopo Department of Transport in order to ensure that logistics and transport technical skills are conceptualised. The critical skill gaps can provide by organisations such as SAPICS, Transport Education and Training Authority (TETA) and National Logistic Centre (NLC) that provide a platform for industry exposure, networking, knowledge sharing and professional certification.
The objectives of this capacity building are:
Develop human resource competence and literacy within the freight transport institution; Promote an integrated approach towards policy and legislative development; Develop a knowledge base and awareness to enable informed decision making; Improve governance practices and techniques; Create a culture of support, partnerships and cooperation within the area of transport planning; Establish structures to drive the process; Develop appropriate infrastructure and systems that will enhance the efficiency and effectiveness of Transport Planning Authority

2) Freight Road Master Plan

Problem Statement:
The FTLM does not have a comprehensive Road Master Plan and it has to develop its long-term Integrated Freight Road Master Plan for both the Local and District Municipality. The Freight Road Master Plan should be developed in the background of the spatial framework, and will have to indicate among the proposal for road linking to the industrials zone, freight centres, and type of industries (i.e. heavy industry vs commercial industry). The industrial zone will be used as an indicator for the type of freight moving in or out of the municipality.
The objectives of this freight road master plan are:
Development of the future infrastructure facilities and improve operation Development of an up to date and accurate central land use / transportation data bank- GIS Integrated multimodal public passenger and freight transportation Determine the economic role of transport; and Integration of transport and land use development.

3) Feasibility study for the development

Problem Statement
The majority of the mining related activities are found in the eastern limb of the bush-veld complex, which lies on the western sector of FTLM. The two major arterials traversing the FTLM viz R555 and R37 essentially run parallel to the mining belt. These routes experience a high volume of freight trucks transporting supplies to and from the mines and retail outlets, public transport (taxis and busses) ferrying people to and from economic and administrative centre's of Polokwane, Lebowakgomo, Burgersfort, Steelpoort, Middleburg, Lydenburg and Nelspruit, and also local private cars from homes to social and economic facilities or places of work between the settlements and beyond; through traffic traveling to and from tourist facilities further east of the FTLM area. Therefore, it will be of paramount importance to separate the mining freight trucks from the general traffic by developing the route dedicated specifically for the mining activities. In addition, have a look in developing a conveyor system that links the mine with the smelter as an alternative transport mode.
The objectives of this mining route are:
Decongestion of the existing major road; Improving the safety of the communities; Improving the security of critical infrastructure; Reducing the environmental impact; Improving the commodity flow; and Promotion and enhancement of the corridor economic development

4) Revatilision of the Apiesdoring and Burgersfort Train Station in order to develop inter-modal facility and the freight centres

Problem Statement
Currently, there is no much activity-taking place from these stations and they seem to be dormant. Their location could be ideal for the development of the intermodal facilities, which would promote the modal shift from road to rail. In addition, the facility could support the development of the Third Party Logistics businesses that include the management of warehousing, road freighter yards and the distribution depots. A sustainable business model is needed to influence Transnet to revitalise the Apiesdoring and Burgersfort stations or any other station in the municipality
The objectives of revitalising the Apiesdoring and Burgersfort stations are:
Promote the modal shift from road to rail and inter-modalism; Promote the region industrial development; Agricultural terminals should be developed and strategically positioned to consolidate volumes from a number of farms; and Multipurpose terminals that combine the loading of bulk and break-bulk commodities into either container or bulk wagons.

5) Development of an overnight truck holding area

Problem Statement
Currently, such facilities do not exist in the FTLM. With expected economic growth supported by the mining activities within the municipality, high influx freight vehicles coming in and out would be expected. A sustainable business model is needed for the establishment of the overnight holding facility such as truck stop.
The objectives of developing an overnight truck holding area are:
Promote safety and security of the freight carrier

6) Impact analysis study on the pavement damage between Burgersfort to Polokwane (R37 route) due to the mining freight vehicles.

Problem Statement
Development of the rail freight between Burgersfort and Polokwane was found not to be economical feasible due to the high-value platinum commodity after processing. Therefore, made platinum not rail friendly commodity. All of these assessments are based on the development of platinum smelter within the district. Currently, there is no platinum smelter in the region. Moreover, there are a number of operational platinum mines such as Twickenham, Marula, Modikwa mine and many more that transport their product to Polokwane Smelter through road freight. Therefore, there is a need to assess the long term impact on the damage to the pavement, and develop the strategies that can assist to alleviate this situation.
The objectives of revitalising the Apiesdoring and Burgersfort stations are:
Develop pavement maintenance planning; Promote safety and security

9.9 Funding

The Limpopo Department of Transport through MTEF budgeting should set aside amounts of funding to enable the preparation of the strategy envisaged in this chapter. This should be accompanied by funding for suitable personnel to drive it and ensure that it is professionally and responsibly produced and that it meets all industry guidelines and requirements and standards. A detailed funding strategy for the projects mentioned here will be discussed in Chapter 11.

9.10 Monitoring

The performance of all projects should be monitored on a regular basis to ensure that the anticipated goals are achieved. The success of freight planning and monitoring is dependent on the active participation of freight stakeholders. Their assistance and support is critical to ensure that the municipality's freight needs are correctly defined and that freight projects receive the appropriate level of priority. Stakeholders and role-players that recognize Freight Transport as a key element within their sector of influence. A schedule of regular monitoring and evaluation of the state of freight transport within the domain of each stakeholder will be undertaken to ensure their coordination, support and thereby ensuring the success of proposed plans for freight movement. For this purpose, it is proposed that a set of key performance indicators (KPIs) be formulated for each project.

Chapter Ten

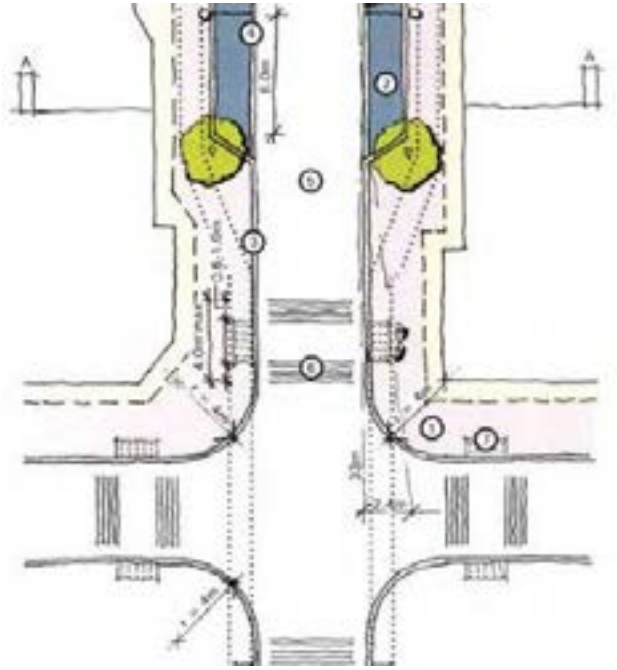
10.1 Parking Analysis

The need for a Parking Policy assessing parking current supply was outlined in the ToR. A Parking Policy is an important component of the Travel Demand Management strategy. The need of parking and/or the restriction thereof in this area can only be decreased by a strategy to introduce NMT and mass public transport such as rapid public transport system. The parking can be a combination of on-street parking, structured parking and open space parking. The existing parking supply in FTLM with a special focus to Burgersfort is mainly on private properties (malls, shopping complexes, etc.), together with on-street parking (very limited) consists of parallel parking, angled parking, 90 degree parking, loading bays, special needs parking and motorcycle parking. The off-street parking includes public open parking, unpaid private and open parking.

The following strategies are proposed:

- Manage parking demand in the Burgersfort CBD (paid parking)
- Zero tolerance for non-compliance with parking restrictions in the Burgersfort CBD
- Efficient loading/off-loading in the Burgersfort CBD through the provision and enforcement of dedicated loading bays
- Provision of dedicated parking for special needs (disabled parking bays)
- Park and ride sites from where public transport services operates so that a person do not need to park in the CBD and this would have a huge boost in alleviating traffic on the R37
- Introduce user friendly technology for the management of parking.

Further to the above the Burgersfort is identified as the SEZ which will have a direct influence on the parking capacity in the CBD due to anticipated increase of economic activity. Another issue is proposed conventional approach (road expansion) to dealing with traffic congestion on R37 corridor in Burgersfort. This will affect many on-street parking bays as in the short term will be removed. The sound and efficient mass public transport mode would have to be introduced. The implementation of the system would decrease the parking required in the CBD in the longer term through the provision of a good public transport system that should encourage its use as an alternative to using a private car.



10.1.1 Study Approach and Guiding Principles

The approach to the proposed parking strategy for the FTLM is based on the following:

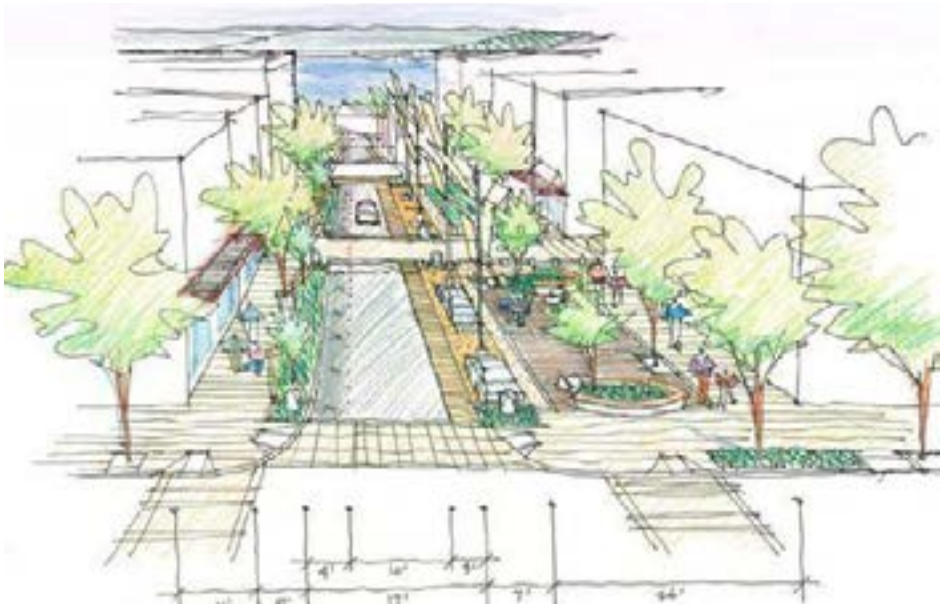
- Reviewing background information and previous strategies;
- Reviewing current practice (local);
- Reviewing supporting technical information;
- Undertaking site visits related to various land uses and locations, and
- Observing cause and effect of current standards and external influences.

In order to conduct this study the following guiding principles was applied, namely:

- Consider relevant policy, legislation, by-laws and town planning scheme requirements;
- Provide adequate parking guidance as a method to effectively manage parking;
- Optimization of parking at certain locations in order to reduce travel demand;
- Provision of paid on-street parking;
- Utilization of parking provision to promote public transport and park-and-ride facilities.

The following was considered in developing the parking strategy in Burgersfort:

- Removal of on street parking bays in the CBD on R37 in Burgersfort;
- Reduction of the number of parking bays in CBD;
- The need to remove loading bays on R37;
- Restrictions on parking to increase the efficiency of loading operations;
- Parking strategy for disabled persons;
- Parking technology solutions;
- Parking guidance;
- Promotion of park and ride systems;
- Promote the use of NMT (walking and cycling);
- Parking payment solutions in CBD – introduce parking meters or handheld parking meter system;
- New municipal by-law on the handheld parking meters came;



10.1.2 Parking Issues

On-street parking in the city centre is unregulated and unorganized in all the streets. There is no parking fee in all the streets, shopping malls and complexes. The on-street parking spots are full between 10am and 5pm Monday – Friday and 8 am and 1 pm on Saturdays without time restrictions.

The following issues are generally encountered:

- Unavailability and loss of on-street parking on R37. In general, on-street parking for shops adjacent R37 in Burgersfort CBD is mostly fully occupied. Finding parking often involves driving slowly on a travel lane, slowing down traffic and contributing to congestion and/or accidents
- On-street parking is currently not charged – the town has many on-street parking bays that were not metered (stock to be confirmed)
- Vehicles parked for long durations – it is often business owners and employees who park their car on-street in front of the store. The car stays parked for most of the day, taking away parking spaces for short term parkers. This would result in a low turn-over rate in the event the town charge for parking;
- Double parking – double parking is due to unavailability of on-street parking space, vehicles stopped or parked on the travel lane. This resulted in the blocking of lanes for through traffic. This situation worsen with taxis and delivery vehicles parking in the travel lane;
- Cars parked on streets where parking is not permitted at all. Similarly, trucks parked in bays reserved for passenger cars and bus bays. Parking infringement was found to be very high;
- No or limited law enforcement exaggerates to problem;
- Unmarked parking areas in the CBD;
- Undersupply of loading areas;
- Undersupply of on street parking in certain areas in CBD; and
- Close relation between parking and informal trading – informal traders encroachment and/or full occupation of street parking. 10.1.3 Parking Strategy

The following strategies should be further investigated and developed, namely:

- The enforcement of zero tolerance in the CBD (R37) of double-parking and unauthorized use of parking designated for disabled people and loading zones;
- Increased visibility of policing in the CBD;
- Introduce advanced technologies to manage and increase the utilization of parking bays;
- Implement hand-held meters on a limited scale which is in its self a method of job creation;
- Implement bollards and kerbs to prevent illegal parking;
- Improve sidewalks and NMT facilities;
- Promote public transport and accessibility to public transport;
- To consider the impact of the loss of parking due to R37 expansion and where it will be accommodated.

10.2 Non-Motorized Transport (NMT) and Universal Access Strategy

10.2.1 Background

South Africa is focusing on and investing heavily in infrastructural development. This largely includes infrastructure that is used by the general public on a daily basis, such as schools, hospitals, stadiums, BRT Systems, trains, stations, airport upgrades and road and intersection upgrades. Historically, detailed provision for NMT infrastructure has not been included into the designs and traditional transport planning. Walkways and cycle paths was generally done as an afterthought and sometimes not at all.

At National, Provincial and Local Government levels, NMT has been identified as a priority area. It has now reached the stage where it is accepted, promoted and prioritized as a feasible and sustainable mode of transport. A key concept that goes hand in hand with NMT is Universal Access (UA), as defined in the following sections.

NMT is transport that requires human energy. These are in the form of bicycles and tricycles, rickshaws, hand push carts, wheel barrow and human porterage, rollerblades, skate boards, push scooters, wheelchair travel etc. NMT includes transport that required the use of animal power for example, horse drawn carts, donkey carts, bullock cart, horse riding etc. The largest portion of NMT is walking. Walking plays a considerable role for long as well as short trips in rural settings, as well as urban areas for accessing mechanized modes of transport. As mentioned earlier in the document a public transport trip is always accompanied by a trip on foot, often called "last mile transport".

In FTLM few people use bicycles for transportation. This is due to sociological and cultural reasons as well as physical obstacles such as hilly terrain, seasonal heavy rainfall, and long distances. Furthermore, for the low-income groups that cannot afford a car, even bicycles are not cheap. Another primary cause is the total absence of appropriate infrastructure, making cycling a risky undertaking.

Taking note of the needs of NMT users, as well as the importance of the NMT mode in terms of creating a low-carbon, equitable city, the FTLM SDF has proposed the following NMT vision for Burgersfort:

- To make R37 corridor in Burgersfort NMT system that is safe, reliable, effective and efficient (including operations and infrastructure) and in support of the municipality strategies for economic and social development whilst being environmentally and economically sustainable.

In line with this proposal the following need to be taken into consideration in

Burgersfort:

- Inclusive Design' or 'Universal Access', that takes everybody into consideration, throughout the travel chain, in any environment, be it rural or urban;
- A universal design approach to the built environment that is accommodative and considerate of people age, ability or status in life, people pushing a trolley or a pram, people with a temporary illness or injury, people with any kind of disability, be it visual, mobility or hearing. This can be any trip hazard, level difference between two surfaces, a flight of stairs or even a single stair or step. Uneven footways, kerbs, bollards or street clutter also hinder movement.
- The application of kerb ramps assist access onto footways for everybody, including people with disabilities and the inclusion of Tactile Ground Surface Indicators (TGSI's) on pedestrian ramps at road crossings assist the mobility of visually impaired by providing information about the approaching road and direction of travel to cross the road safely as well as from what direction the traffic is approaching in the case of controlled crossings.

Explore feasibility and integration of BRT system in Burgersfort on the following grounds:

- Some of the biggest infrastructure development and transport investment projects ongoing in South Africa, are the BRT projects. Currently there are 13 projects in various phases of design and construction in South Africa. All have a high focus on NMT and universal access.
- Where the BRTs are operational or under construction thousands of intersections are impacted by the BRT projects and their supporting feeder bus systems. This includes kilometers of footways, thousands of pedestrian crossings as well as cycle facilities and bus stops that will need design and upgrading.
- The complete transport system has to be integrated with other facilities as per the NMT policies and Master Plans. This includes the full travel chain to all users and by not discriminating against anyone due to age or physical competence.

10.2.2 Objectives and Principles of NMT

The following objectives, which are in line with national policy have been identified, taking cognisance of the area of Burgersfort:

- Integration of NMT into the transport system including transport and spatial planning;
- Endorsement and facilitation of the use of NMT modes;
- Development of infrastructure and maintenance standards that recognize NMT as an essential mode of transport;
- Facilitation of NMT as a feeder system to other modes of transport;
- Promotion of NMT as reliable, healthy, affordable, accessible and safe transport mode;
- Reduction of the number of traffic fatalities of vulnerable non-motorized road users; and
- Raising awareness about the significance of NMT within the entire transport fraternity.

10.2.3 Existing Policies and Guidelines

One of the strategic objectives for Land Passenger Transport that is presented within the White Paper on National Transport Policy, 1996:

"Ensure that passenger transport services address user needs, including those of commuters, pensioners, the aged, scholars, the disabled, tourists and long distance passengers"

This is affirmed in all of the following constitutions, conventions, acts etc.:

- The United Nations (UN) Convention on the Rights of Persons with Disabilities (Article 9) (UNCRPD);
- International Obligations under binding treaties and customary International law, Human rights, equality and prevention of unfair discrimination;
- 8 Millennium Development Goals (MDGs) identified by the United Nations in 2000;
- The Constitution of the Republic of South Africa (Act 108 of 1996);
- The Promotion of Equality and Prevention of Unfair Discrimination Act, 2000 (Act No 4 of 2000);
- The Integrated National Disability Strategy White Paper, Nov 1997;
- The National Development Plan targets;
- The Disability Rights Charter of South Africa;
- Integrated National Disability Strategy (INDS - 1997). White Paper (Policy);
- The White Paper on National Transport Policy, 1996;
- The National Land Transport Strategic Framework, 2006-2011 and 2014 NLTSF);
- The Public Transport Strategy and Action Plan, 2007 (PTS);

- The Rural Transport Strategy for South Africa, 2007;
- Department of Transport Draft NMT Policy Document (2008);
- National Land Transport Transition Act (No. 22 of 2000); National Road Traffic Act (NRTA) (No 93 of 1996);
- Animal Protection Act (No. 71 of 1962);
- The National Road Traffic Regulations of 1999 (are particularly important as they affect and regulate NMT, particularly bicycle transport);
- The National Land Transport Act (No 5 of 2009);
- The National Road Traffic Act 93 of 1996 (NRTA);
- The National Road Traffic Regulations, 2000 (NRT Regs);
- The Administrative Adjudication Of Road Traffic Offences Act (No. 46 of 1998);
- The National Building Regulations and Building Standards Act 103 OF 1977;
- The South African National Roads Agency Limited And National Roads Act (No. 7 of 1998) (SANRAL ACT) And Other Roads Legislation;
- National Transport Master Plan (NATMAP);
- National Spatial Development Framework;
- The National Environmental Management Act 107 OF 1998 (NEMA);
- The National Heritage Resources Act 25 OF 1999;
- The Promotion of Administrative Justice Act 3 OF 2000 (PAJA);
- Legal requirements for animal drawn vehicles;
- South Africa's Universal Access Regulations (these are currently being drafted);
- Municipal By-Laws required by The Constitution and the National Road Traffic Act;
- NDoT NMT Guidelines, 2014 (Update From NDoT Pedestrian and Cycle Facility Draft Guideline, 2003);
- NDoT Conditional Public Transport Infrastructure and Systems Grant (PTISG);
- NDoT Strategy and Action Plan Municipal Systems Act (MSA);
- The Road To Safety Strategy (2001-2005);
- Sekhukhune Integrated Transport Plan (2007)
- Fetakgomo Tubatse Local Municipality Draft Integrated Development Plan (2018/19);
- FTLM Spatial Development Framework (2020);
- DM Municipality NMT Master Plan (2019 commissioned, not yet finalised).

The Public Transport Strategy outlines the process towards achieving universally accessible transport. This process is to be incremental, with new systems to achieve universal access in FTLM.

10.2.4 NMT Guidelines and Standards (South Africa)

The NMT Guidelines and Standards in South Africa is developed by NDoT in conjunction with South African Bureau of Standards (SABS), some disability groups like the South African National Council form the Blind (SANCB) etc. Some cities have been developing their own NMT guidelines and Standards including the City of Tshwane, The City of Cape Town and the City of Johannesburg. FTLM has to develop their NMT Facility Guideline.

10.2.5 NMT Status Quo

The footways and cycle ways are mostly inadequate or non-existing in Burgersfort. Where footways are available, they have been poorly maintained and are crumbling and unsafe. Certain sections are muddy and flooded rendering it unusable. Pedestrian crossings are mostly un-signalised and lining faded. On some locations, particularly high volume traffic and 100km/hour speed limit area there were no pedestrian crossings. Traffic calming measures are inadequate and overall Universal Access and design is lacking. Due to Burgersfort being one of the SEZs, accessibility has to be improved in the form footways. The routes have to link the main activity centres the mini-bus taxi ranks, the shopping malls, etc.

10.2.5.1 Walking

District	Bus %	Midi Taxi %	Kombi Taxi %	Other %	Non Motorised %
Capricon	1.66	1.44	23.85	72.73	0.32
Sekhu-khune	0.91	0.82	15.97	81.31	0.00
Vhembe	3.40	0.32	22.21	74.05	0.03
Mopani	1.88	0.75v	17.09	80.12	0.16
Waterberg	2.55	1.14	12.75	83.50	0.07
Average	1.96	0.83	20.03	77.05	0.13

Table 10.1: Mode share
Source: Limpopo Department of Roads and Transport (2010)

From the above analysis, the traffic modal split is still dominated by other modes (private transport) which comprises of private and heavy vehicles and non-motorized was very low. An analysis of the sample size of 2804 people in Burgersfort revealed walking to be 22% and there were no other NMTs as so shown in Figure 10.1 below.

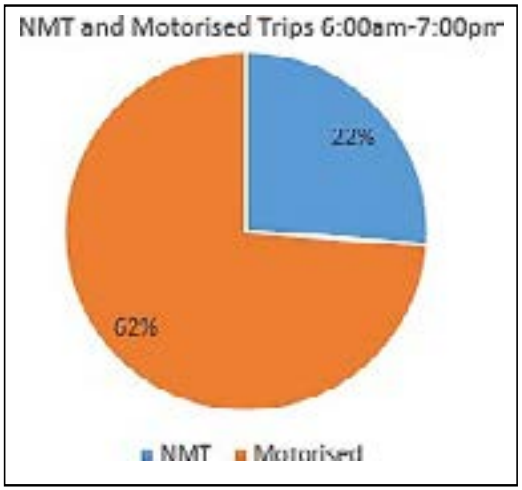


Figure 10.1: NMT and Motorised Trips in Burgersfort
Source: FTLM Road Master Plan (2019)

10.2.5.1. Cycling Potential

If the objective is to achieve a mode shift to more sustainable transport modes, the following opportunities should be targeted or prioritised:

- Attracting people that currently walk excessive distances to cycling, by improving cycling facilities (safety) and possibly to assist those people with access to bicycles as the majority of people walking excessive distances do so due to unaffordability of alternative modes. The travel time savings of cycling will also improve their quality of life in other ways.
- Attracting people that currently use public transport or cars for short trips that are potentially within cycling range. Car users in this category that switch to cycling will result in an environmental improvement, while public transport users switching to cycling is more than likely going to save money over the long term.

Walking and cycling is only appropriate for shorter distance trips. This should be taken into consideration when developing targets for improvement, to ensure realistic expectations.

For example, due to the large geographic spread of FTLM, low residential densities, and legacy of apartheid and subsequent housing policies resulting in a large proportion of people living long distances from most economic opportunities, only a relatively limited number of commuter trips can realistically take place by NMT. The importance of densification and the development of transit oriented developments to reduce the travel distances that need to be covered cannot be over emphasized

10.3 Proposed Roads Policy

In addition to the strategies referred to elsewhere in this LITP, FTLM Road Master Plan has developed road policy covering the following:

- Legal Framework
- Project Development
- Level of Service
- Road and Stormwater Capital Projects Priotisation Policy
- Roads and Stormwater Maintenance Policy
- Way-leave Application Policy
- Traffic Impact Assessment Policy
- Access Control Policy
- Environmental Policy
- Roadside Advertising and Tourism Signs
- Road Lighting
- Pedestrian Facilities, Cycle Paths and Livestock Crossings

10.4 Priorities along each corridor

The Limpopo Department of Roads and Transport (LDRT) (2010) defined priorities along public transport corridors as those interventions that would result in enhancing travel by public transport along the routes, to an extent that people would leave their private vehicles and travel by public transport. In terms of infrastructure, LDRT strategies include the provision of the following:

- Additional dedicated lanes on public transport routes, particularly in Burgersfort and high built-up areas;
- Provision of climbing lanes at strategic sections along public transport routes;
- Widening of existing narrow surfaced shoulders;
- Provision of adequate surfaced shoulders at strategic sections,
- Surfacing of collector gravel roads: secondary and tertiary, which are justifiable;
- Regravelling of poor gravel roads;
- Provision of adequate drainage structures to ensure all-weather travel and connectivity – even to isolated villages;
- Provision of non-motorised transport facilities at strategic locations on the network;
- Effective road maintenance programmes, e.g., implementation of road management systems

10.4.1 Additional dedicated lanes

One of the most common strategies in major cities is the provision of dedicated public transport ways at highly congested sections of their networks. Sometimes these dedicated ways could be opened up for private transport during off-peak periods. Additional lanes are normally essential in urban areas where there are traffic congestions.

10.4.2 Climbing lanes

Major delays occur where public transport vehicles have to follow slow moving trucks in steep mountainous sections of the road network. These conditions do occur at some sections of the roads in the Province, and result in travel delays for public transport. The provision of climbing lanes, especially on long steep routes would ease the flow of traffic on the road network. These widened sections could be marked as dedicated lanes to favour the use by public transport vehicles.

10.4.3 Widening of existing narrow surfaced shoulders

The majority of the roads in the Provincial network do not have adequately constructed shoulders. The situation may be worsened by worn-out edges and shoulders that are in dire need for re-gravelling. Adequate surfaced shoulders have a huge potential to increase the capacity of a road, and thus result in rapid public transport in the system. These will need to be wide enough to enable slow moving vehicles such as trucks, to drive on them and allow public transport to pass. A total shoulder width of 2.5m would be adequate. Adequate signage will have to be placed to regulate the traffic.

10.4.4 Provision of adequate surfaced shoulders

The majority of the surfaced roads in the municipality have no surfaced shoulders, even though they may have wide enough gravel shoulders. The capacity of these roads could be enhanced by surfacing the shoulders. A total shoulder width of 2.5m would be adequate.

10.4.5 Surfacing of Gravel Roads

Poor gravel roads have a huge negative contribution towards delays on public transport and movement of passengers. Travel times could be reduced tremendously when gravel roads are surfaced. The recommended surfacing of roads was also based on the access to the following public or community facilities:

- Clinics and Hospitals
- Shopping centres
- Schools
- New and future developments

10.4.6 Regravelling of roads

Those gravel roads that cannot be justified for surfacing both economically and socially, should at least be regravelled in order to improve their riding quality. This would result in the reduction of travel times on the network. The following criteria can be used to determine which gravel roads should be regravelled:

- Passenger volume exceeding 300 passengers peak hour period
- Roads in a poor state and inaccessible

10.4.6.1 Rural roads ugrading/rejuvenation programme

Rural roads provide much needed access to villages far flung from the urban centres of the municipality. These access roads are often the main way for villages to access key servces inlcuding connecting to places of employment and commercial activities. These roads can be incorporated in the roads revitalization strategy and maintanance plan. Methods for gravelling can shift from asphalt based method to paving which incorporated labour intesive construction and can be built with locally made materials creating much needed jobs and the transfer of critical skills.

Given the spatial context of the municipality. The use of technology such as GIS and Remote Sensing will aid the municipality with a clear picture of key gravel roads that require attention as well as those roads at high risk of flooding and thus blocking access of villages to key amenities.

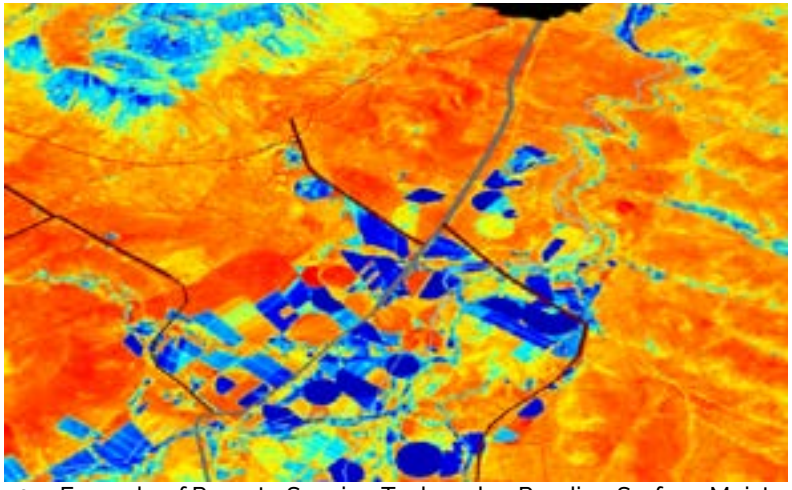


Figure 10.2: Example of Remote Sensing Techonolgy Reading Surface Moisture and the location of gravel roads and settlements to identify priority roads for consideration of tarring or paving.

Figure 10.3: Example Paved village roads for improved accessibility using labour intensive pavers. This method promotes the creation of local jobs and transfer of skills to SMMEs within the municipality. This mathod can be considered for the rural areas.

10.4.7 Provision of adequate drainage structures

The provision of adequate drainage structures will open up access for remote communities. This strategy could be one simultaneously with the regravelling of the road in the network. The following criteria can be used to determine the drainage structures along the corridors:

- Rainfall in the corridor area;
- The terrain (flat, rolling or mountainous);
- New drainage structures along the new proposed surfaced road

10.4.8 Non-motorized transport facilities

Recent many cities around the world have introduced micro mobility vehicles such as scooters and skateboards, with-or-without electrical engines. So far,

the trend is mostly seen in cities with infrastructure that is suitable for this purpose. But it should not be ruled out in Burgersfort.

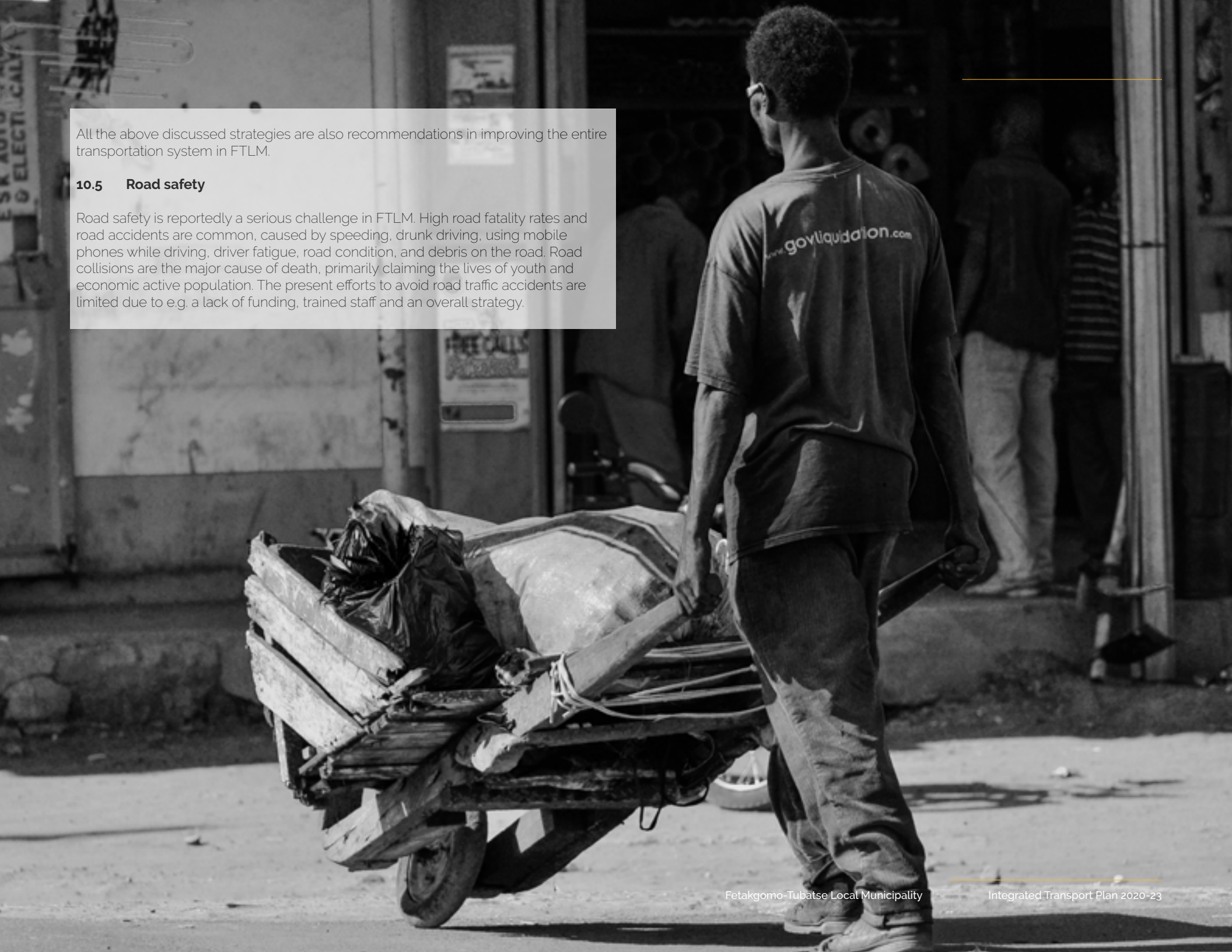
Non-motorised transport facilities comprise the following aspects that should be integrated into the whole public transport infrastructure implementation strategies in the municipal network.

- Walkways
- Cycle-ways
- Bicycle storage facilities
- Animal-drawn vehicle-ways

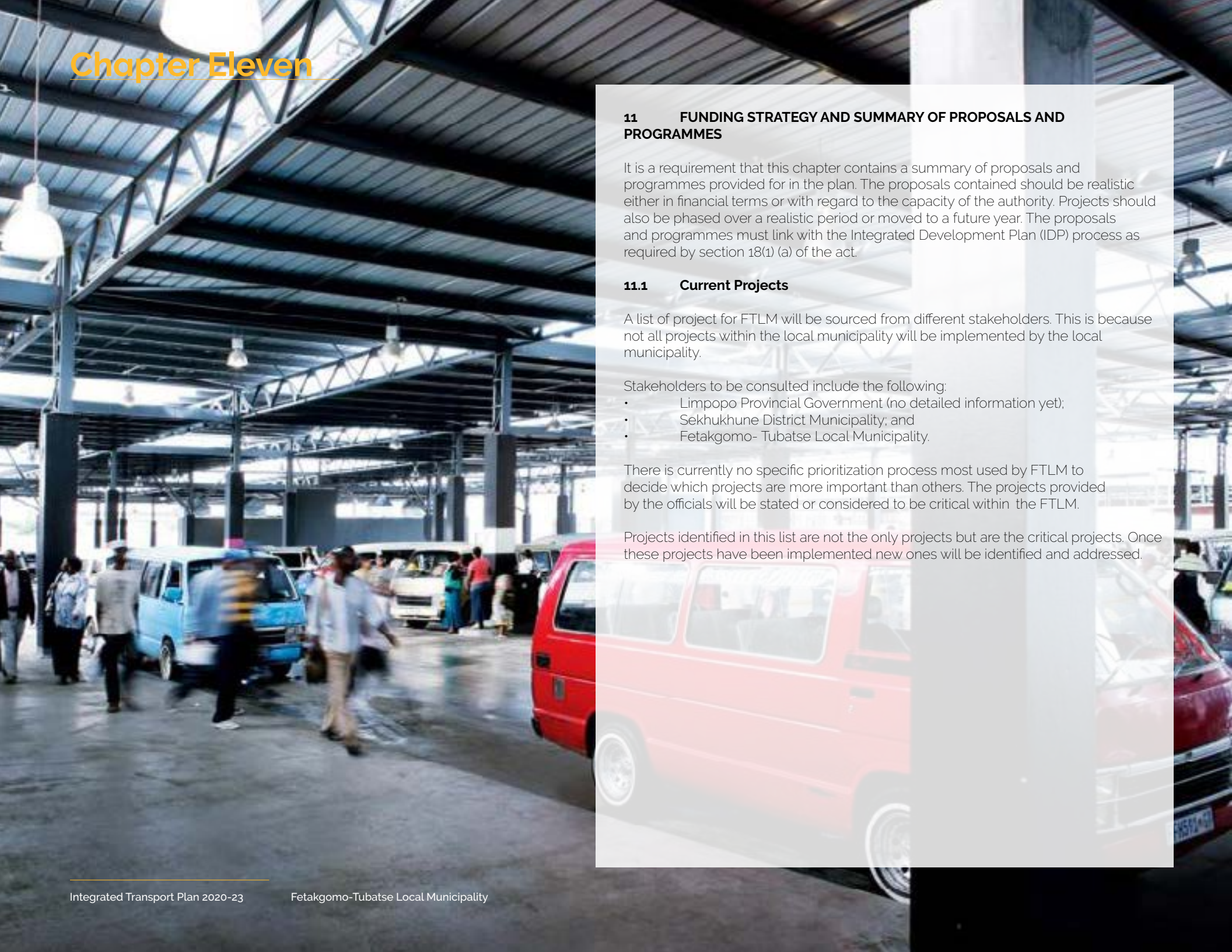
All the above discussed strategies are also recommendations in improving the entire transportation system in FTLM.

10.5 Road safety

Road safety is reportedly a serious challenge in FTLM. High road fatality rates and road accidents are common, caused by speeding, drunk driving, using mobile phones while driving, driver fatigue, road condition, and debris on the road. Road collisions are the major cause of death, primarily claiming the lives of youth and economic active population. The present efforts to avoid road traffic accidents are limited due to e.g. a lack of funding, trained staff and an overall strategy.



Chapter Eleven



11 FUNDING STRATEGY AND SUMMARY OF PROPOSALS AND PROGRAMMES

It is a requirement that this chapter contains a summary of proposals and programmes provided for in the plan. The proposals contained should be realistic either in financial terms or with regard to the capacity of the authority. Projects should also be phased over a realistic period or moved to a future year. The proposals and programmes must link with the Integrated Development Plan (IDP) process as required by section 18(1) (a) of the act.

11.1 Current Projects

A list of project for FTLM will be sourced from different stakeholders. This is because not all projects within the local municipality will be implemented by the local municipality.

Stakeholders to be consulted include the following:

- Limpopo Provincial Government (no detailed information yet);
- Sekhukhune District Municipality; and
- Fetakgomo- Tubatse Local Municipality.

There is currently no specific prioritization process most used by FTLM to decide which projects are more important than others. The projects provided by the officials will be stated or considered to be critical within the FTLM.

Projects identified in this list are not the only projects but are the critical projects. Once these projects have been implemented new ones will be identified and addressed.

Proposed Project	Proposed Structure Type	Quantity (Length (m/ No)	Cost					
			2020/21	2021/22	2022/23	2023/24	2024/25	Total
Construction of Longtill/Tukakgomo Stormwater System	Underground Stormwater Ground	2000	R19 200 000					R19 200 000
Construction of Praktiseer Stormwater System	Underground Stormwater Ground	1000		R8 000 000				R8 600 000
Construction of low level bridge in Phageng	Low-level Bridge	2	R5 000 000			R5 000 000		R10 000 000
Construction of low level bridge in Seroka	Low-level Bridge	1			R5 000 000			R5 000 000
Construction of 1500 x 600 mm box culvert from Mareseleng to Mashamthane Zone 5	Box Culvert	1			R4 500 000			R4 500 000
Construction of 1500 x 600 mm box culvert (Dibe Access Bridge)	Box Culvert	1			R4 500 000			R4 500 000
Construction of 2000 x 900 mm box culvert (Motodi Access Bridge)	Box Culvert	1			R4 500 000			R4 500 000
Construction of 2000 x 900 mm box culvert (Bothashoek Access Bridge)	Box Culvert	1			R4 500 000			R4 500 000
Total	R24 200 000	R8 600 000	R14 200 000	R14 200 000	R0	R61 200 000		

Table 21.1: The 2020-2025 FTLM Road Master Plan Projects to be prioritized

11.1.2 IDP Identified Projects in FTLM

A number of proposals and programmes were identified in the Final Consolidated IDP 2016. However, the FTLM's final IDP fails to break down the cost implications for each project.

PROJECT NO.	PROJECT NAME	TARGET	BUDGET					RESPONSIBLE DEPARTMENT
			2016/17	2017/18	2018/19	2019/20	2020/21	
BDS/16/17/45	Burgersfort Internal roads	3k	00	00	00	00	00	FTLM
BSD/16/17/47	Bothashoek access road	2.5 km	5,977m	6m	6m	00	00	MIG
BDS/16/17/48	Praktiseer Stormwater Drainage System	6km	00	5m	11m	00	00	MIG
BDS/16/17/51	Bothashoek access brigde	100%	3m	00	00	00	00	MIG
BDS/16/17/52	Ga-Motshana access bridge	100%	6m	00	00	00	00	MIG
BDS/16/17/53	Mafarafara Access Access Brigde	100%	9.035m	00	00	00	00	MIG
BDS/16/17/54	Mpuru Access Bridge	100%	00	5.3	00	00	00	FTLM
BDS/16/17/55	Madithongwana access bridge	100%	6m	7m	00	00	00	FTLM/MIG
BSD/16/17/56	Diphala/Makhwaya access bridge	100%	12m	00	00	00	00	FTLM/MIG
BDS/16/17/57	Mabocha access bridge	100%	9.7m	00	00	00	00	MIG/FTLM
BDS/16/17/59	Legoleng Access Bridge	100%	7m	00	00	00	00	MIG/FTLM
BDS/16/17/58	Leboeng Area Access bridges	100%	4.1m	00	00	00	00	FTLM/MIG
BDS/16/17/60	Tjate Access Bridge	100%	1m	5m	5m	00	00	FTLM
BDS/16/17/61	Morokadieta Access Bridge	100%	1m	5m	1m	00	00	FTLM
BDS/16/17/62	Ga-Malwane Access bridge	100%	1m	5m	1m	00	00	FTLM
BDS/16/17/63	Dithamaga	100%	1m	3m	00	00	00	FTLM
BDS/16/17/64	Lefahla Access bridge	1m	2m	4m	00	00	00	FTLM
BDS/16/17/65	Ga-Maroga Access Bridge	100%	1M	5m	00	00	00	FTLM
BDS/16/17/66	Ga-Mabelana (Mothodi) Access Bridge	100%	00	1m	5m	00	00	FTLM
BDS/16/17/67	Ga-Makgaganya Access bridge	100%	00	1m	6m	00	00	FTLM
BDS/16/17/68	Ga-Maswikeng Access Bridge	100%	00	00	00	00	00	FTLM
BDS/16/17/69	Kgwedi Access Bridge	100%	00	00	00	00	00	FTLM
BDS/16/17/70	Matimatjatji Access Bridge	01	00	00	00	00	00	MIG
BDS/16/17/71	Masago Access Bridge	01	00	00	2m	2m	00	MIG
BDS/16/17/72	Moeng Access Bridge	01	00	00	00	00	00	MIG

BDS/16/17/73	Nonyane Access Bridge	01	00	00	00	00	00	MIG
BDS/16/17/74	Sekabate Access Bridge	01	00	100k	3.5m	00	00	MIG
BDS/16/17/75	Mankgaganya Access Bridge	01	00	100k	3.5m	00	00	MIG
BDS/16/17/76	Makakatela Access Bridge	01	00	100k	2.5m	00	00	MIG
BDS/16/17/77	Mphana Access Brigde	01	00	100k	2.5m	00	00	MIG
BDS/16/17/78	Swale Access Bridge	01	00	100k	2.5m	00	00	MIG
BDS/16/17/79	Sekabate Access Bridge	01	00	100k	3.5m	00	00	MIG
BDS/16/17/80	Mokgethi Access Bridge	01	00	100k	3.5m	00	00	MIG
BDS/16/17/81	Difateng Access Bridge	01	00	100k	3.5m	00	00	MIG
BDS/16/17/82	Molekane Access Brigde	01	00	100k	3.5m	00	00	MIG
BDS/16/17/83	Maatadi Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16//17/84	Moajoe-a-Kgoro Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/85	Mamphahlane to Ga-Mpuru Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/86	Ga-Maapea to Ga-Podile Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/87	Maphopha Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/88	Sengange Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/89	Sekopung Access Bridge	01	00	00	3.5m	00	00	MIG
BDS/16/17/94	Relocation Burgersfort transport facility	100%	100k	4m	00	00	00	FTLM
BDS/16/17/103 BDS/16/17/104 BDS/16/17/105	Gravelling and Roads maintenance Traffic lights maintenance Street lights maintence	100% 100% 100%	20m 4m 2m	22m 4.5m 2m	24m 5m 2.5m	26m 5.5m 2.5M	28m 6m 3m	FTLM FTLM FTLM
	Motaganeng Access Bridge	100%	1m	00	00	00	00	FTLM
	Leboeng Access road	100%	1m	00	00	00	00	FTLM
	Tukakgomo Access road	100%	1m	00	00	00	00	FTLM
	Thokwane road	100%	1m	00	00	00	00	FTLM

FTM/SD3	Construction of culvert drainage	31st March 2017 Construction of 08 Culvert Drainage Structures across four nodal points Apel: ward 03, 05, 06, & 08 Atok: ward 10, 11, 12 & 13 Stydskraal: ward 07 Mphanama: ward 01, 02, & 04	19.1m	00	00	00	00	FTLM
FTM/SD3	Construction of V drain structures	30th June 2017	100k	150k	200k	00	00	FTLM

Table 11.2: Relevant projects / programmes in FTLM

11.2 Prioritization / Multi-Criteria Model

The prioritization model will only be used as an indication of which projects should be given priority, when assessing the intervention's strategic choices. The multi-criteria analysis can be used for:

- Evaluating the ability of various activities of a programme to fulfil a given objective.
- This assessment can take place to collect the opinions of decision- makers and beneficiaries about the effectiveness of the projects.
- To structure the views of project or programme managers about on-going activities.
- To discuss the content of the programmes, and the funding of various activities during the drafting of strategies and programmes.

The steps involved in multi-criteria analysis are shown in Table 11.3

1	Choose a list of projects to be evaluated
2	Choose the negotiation / judgement group
3	Choose the technical team responsible for supporting the judgement team group
4	Establish the list of competing activities to be included in the analysis
5	Determine judgement criteria
6	Determine each criterion's relative weight
7	Formulate a judgement per criterion
8	Aggregate judgements

Table 11.3: Prioritization Steps

Stage 1: Choose a list of projects to be evaluated

The evaluating team needs to be provided with a list of projects that need to be evaluated.

Stage 2: Choose the negotiation / judgement group

The multi-criteria analysis will be based on the rating by the members of the judgement group – FTLM officials in this case. The FTLM officials will provide PKC with projects in FTLM.

Stage 3: Choose a technical team responsible for supporting the judgement team

The technical team (PKC) have provided support to the judgement group (FTLM officials).

Stage 4: Establish the list of competing activities to be included in the analysis

Depending on what the multi-criteria process aims to achieve, it can also help in the comparison of:

- Scenarios or potential solutions in the planning or payment evaluation
- Choices of land use planning

- Activities implemented in a programme.
- At this point, a list of projects and budgets should be ready for analysis.

Stage 5: Determine judgement criteria

This is one of the main stages of the analysis. The outline of the criteria should be defined:

- The criteria for the selection of projects should be defined by the rules recognized and accepted by all the FTLM officials
- These usually integrate all points expressed by other members
- They should be comprehensive, resulting in reasonable and non- disputable findings.

Stage 6: Determine each criteria's relative weight

This is the stage where each criteria is now given the weight in order to measure their relative importance against other projects.

Stage 7: Formulate a judgement per criterion

Each of the criteria is now given a value based on its impact. This evaluation can be quantitative or qualitative. This stage aims at providing each activity with a rating for each criterion.

Stage 8: Aggregate judgements

Several methods for the aggregation of judgement can then be developed. These can be the weighted sum method, the weighted sum product, the outranking method etc. If the project to be undertaken happens as an agreement in a group working with criteria of identical weight, the performance table represents the findings of the multi-criteria analysis.

Using the above mentioned methodology, the prioritisation model to be used is outlined below. Only four criteria will be used as a basis towards the weighting the importance of one project relative to another. The criteria will be governance, spatial development opportunities, efficiency gain and the impact.

- Governance – All projects are usually informed by studies required by the municipality. This is further influenced by mayoral priorities. Regulatory requirements consider whether legal requirements have been met, such as EIA, etc. Sectorial plans include the relevant department's own technical rating. For example, the ITP informing the municipality on transport priorities. This element is brought in at a very high level of the model, as it is deemed of strategic importance. Mayoral priorities are initiatives of the Mayor addressing political priorities.

- Spatial Development Opportunities – Known projects will be informed by areas which are targeted for projects meant to stimulate economic growth. It is important that investment be mainly directed towards investment opportunity areas. The target areas which have potential for economic growth and development are capital core, transit oriented developments, social housing, node, urban core, and specialised nodes.

- Efficiency Gains – Efficiency and effectiveness are essential in programme and project planning and implementation. Programming and synchronization will be essential in wanting to realize impactful service delivery.

- Impact – It is important that upon implementation that a project yields financial, economic and social value investments. Socio-economic development, in a true sense, therefore seeks to find a balance between economic activities, the natural environment, and society. As each dimension is related to the other, a negative situation in one dimension will negatively affect other dimensions. There will be serious economic consequences should environmental costs increase over time. This will inevitably impact society in terms of employment, income and general welfare, and further in production and GDP.

Criteria	Weighting Area	Points	Weight
Governance	Regulatory Requirement	25	30
	Sectorial Plans	5	
	Mayoral Priorities	10	
Spatial Development Opportunities	Target Area	10	20
	Economic growth	10	
Efficiency Gains	Effectiveness	10	20
	Synchronization non R37	5	
	Synchronization with R37	5	
Impact	Economic	15	30
	Social	10	
	Environmental	5	

Table 11.4: Prioritisation Criteria and Weights

11.3 Funding

Municipalities have at their disposal various sources of funding that they can apply for in order to carry out their projects.

- Medium Term Revenue and Expenditure Framework (MTREF) Budget
- Public Transport Intrastructure and Systems Grant (PTISG) from National Treasury
- Public Transport Operations Grant (PTOG)
- Division of Revenue Act/Bill (DORA)
- Municipal Infrastructure Grant (MIG)
- Capital Replacement Revenue (CRR)
- Public Transport Infrastructure System Funding Allocations (PTISF)

As a requirement, Municipalities are supposed to draw up a business plan for submission to the Department of Transport. The business plan is used as a motivational tool for funding from the PTISG from the National Treasury through the Department of Transport.

Sources of funding can be classified into two categories, these can either be internal or external and are elaborated on in the following paragraphs:

11.3.1 Internal Funding

Public Transport Infrastructure Systems Funding Allowance (PTISF)

This is a development fund which identifies projects with a focus to achieve specific Department of Transport (DoT) objectives. These projects are approved by DoT based on a project submission of the Local Municipality which is then evaluated on merit. It is reflected in the MTREF budget.

Medium Terrm Revenue and Expenditure Framework (MTREF)

Internal Funding is guided by the Municipal Finance Management Act, (MFMA). Changes to the current budget allocations are only possible by means of the Adjustments Budget process which is performed mid-term of a particular financial year.

Capital Replacement Reserve (CRR)

The CRR allocation is for Municipalities to the department to either implement, upgrade and replace infrastructure and equipment in departments are reflected in the MTREF budget approval. The grant was approved for 12 identified cities by Cabinet in 2007. Funding is provided by National Treasury through the department of Transport.

11.3.2 External Funding

High quality car competitive public transport systems are funded through the conditional Public Transport Infrastructure and Systems Grant ((PTISG).

Division of Revenue Act/Bill (DORA)

The division of Revenue Bill (Gazette No 35022 dated 7 February 2012) identifies the individual municipality's equitable share of the National Revenue which is allocated to municipalities for implementation during 2014/15 financial years. The total allocated to the Local Municipality, might consist of a portion allocation to the district and the province.

Municipal Infrastructure Grant (MIG)

The MIG funding is received from the Department of Public and Local Government based on the approval of submissions of approved project business plans. A portion is assigned to the province, then to the district and finally to the Local Municipality.

Public Transport Operations Grant (PTOG)

Transport Agency or entity Funding is allocated annually to the municipality by means of a multiyear programme by the Division of Revenue Act. This funding is allocated to the provincial government to supervise and manage the planning of PT routes, oversee the tendering process, the controlling and monitoring of the provision of subsidized Public Transport services.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Chapter Twelve

12 STAKEHOLDER CONSULTATION AND PROGRAMMES

The process of stakeholder consultation and public participation is a pre- condition for the final adoption and the approval of the LITP document. Some of the stakeholder consultation processes have been conducted and on- going and others due to be undertaken as part of the LITP as listed below:

- Consultation with general public – partly outstanding as the Household Travel Survey Data, 2013 has been used to fill other gaps
- Consultation with community (stakeholder consultation meetings) – outstanding
- Consultation with District authorities – on-going
- Consultation with Provincial authorities – on-going

Stakeholder consultation plays an important role throughout the various phases of the transport planning process, including:

- Formulation of Transport Vision Statements, Goals and Objectives
- Co-ordination with FTLM ITP TSC and PSC
- Collection of the relevant documentation on transport planning and strategies, including freight, parking, intermodal facilities, town planning and local developments, operations of the Mayor's office and others; and
- Listing of the planning projects and formulation of the prioritization criteria and process.

In order to meet the minimum requirements, and adding up to the list of stakeholders as presented in Chapter 1 of this document the following list of the stakeholders in FTLM is earmarked for consultation:

- Operator Associations (Minibus-Taxi) via the Transport Forums
- Special Interest Groups (e.g. Hawkers)

The data and information that was and will be collected during this project is and will be incorporated where appropriate and in appendices of this report. There will be a number of stakeholder meetings and stakeholder engagement plan will be submitted Post-Covid-19 and others had already occurred as listed below.

- 6 Progress and technical meetings
- Survey workshop and skills transfer
- Road Master Plan consultation
- Roads department consultation on Provincial and District Road Master Plans
- Consultation with local developers on local developments in the municipality.

Detailed list of the stakeholder meetings will be formulated and annexed Post-Covid19.

Public participation process (PPP) will be done once the final report is approved. It will be done in accordance with the FTLM Department of Planning and Development, and Technical and Infrastructure Services. Also, it will be done in accordance with the Council's requirements