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**GREATER SEKHUKHUNE DISTRICT MUNICIPALITY**  
**CURRENT PUBLIC TRANSPORT RECORDS (SDM-CPTR)**

DECEMBER 2006



**TITLE: GREATER SEKHUKHUNE TRANSPORT PLANS (2005/06)**

**VOLUME 1: CURRENT PUBLIC TRANSPORT RECORDS (CPTR)**

**December 2006**

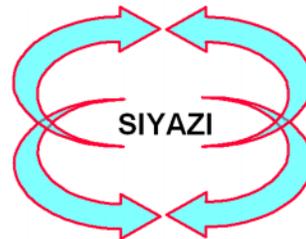
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The Transport Plans for Greater Sekhukhune District Municipality comprise five volumes:

- Volume 1: Current Public Transport Records (CPTR) (prepared by Siyazi-Khosa Joint Venture, December 2006)
- Volume 2: Operating Licence Strategy (OLS) (prepared by Siyazi-Khosa Joint Venture, January 2007)
- Volume 3: Rationalisation Plan (RATPLAN) (prepared by Siyazi-Khosa Joint Venture, December 2006)
- Volume 4: Public Transport Plan (PTP) (prepared by Siyazi-Khosa Joint Venture, March 2007)
- Volume 5: Integrated Transport Plan (ITP) (prepared by Siyazi-Khosa Joint Venture, March 2007)

**Terms of reference**

The Siyazi Joint Venture was appointed by the Limpopo Province Department of Transport on 22 June 2006 to conduct an Operating Licensing Strategy (OLS). The Siyazi Joint Venture consists of the following companies:

- Siyazi Limpopo (Pty) Ltd
- Khosa Development Specialists
- Members of the community.

Although the Limpopo Province Department of Transport appointed the Siyazi Joint Venture, it was stipulated that a strategy should be followed which would include all role players, with specific reference to the Greater Sekhukhune District Municipality. It was also necessary to ensure that this Integrated Transport Plan would comply with all Local, Provincial and National Government requirements.

**TITLE: GREATER SEKHUKHUNE TRANSPORT PLANS (2005/06)**

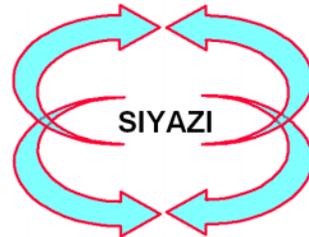
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**TABLED TO THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY AND APPROVED  
ON.....**

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## **EXECUTIVE SUMMARY**

### **a) Terms of reference**

Each district municipality that is a planning authority is responsible in terms of the National Land Transport Transition Act (Act 20 of 2000) for preparing a Current Public Transport Record (CPTR) for its entire area.

### **b) Purpose of the study**

Based on the *Government Gazette* published on 24 July 2002, the purpose of the CPTR is to provide a record of public transport services, facilities and infrastructure, which will constitute the basis for the development of the operating licence strategies, rationalisation plans and integrated transport plans for the Greater Sekhukhune District Municipality.

### **c) Study area**

The scope of the work covers the whole area of jurisdiction of the Greater Sekhukhune District Municipality, which includes the five Local Municipality areas of the Elias Motsoaledi Municipality; Greater Marble Hall Municipality; Greater Tubatse Municipality; Fetakgomo Municipality and Makhuduthamaga Municipality.

### **d) Approach taken and report**

The report contains two main sections, namely the method used to prepare the record and the actual record of public transport.

The elements of the methodology used include consultation and liaison, site visits, surveys, database development, the capturing, dissemination and storage of data, and the preparation of the report.

The following role players were consulted:

- i) Limpopo Province Department of Transport – Public Transport Division
- ii) Limpopo Province Department of Transport – Registrar of Taxis
- iii) Limpopo Province Department of Transport – Operating Licence Board
- iv) Greater Sekhukhune District Municipality
- v) Greater Sekhukhune District Taxi Council
- vi) Lowveld Taxi Council
- vii) Local municipalities
- viii) Bus industry
- ix) Greater Sekhukhune District Transport Forum.

Site visits were arranged to the different local public transport facilities, so that the study team could acquaint themselves with the conditions, circumstances, operational practices and all practical issues that would be essential for the planning process.

Once all the necessary arrangement and liaison had been completed, planning to conduct the surveys commenced. The planning process was communicated and discussed with the Greater Sekhukhune District Municipality and with the role players in the relevant public transport industries.

The surveys were conducted in accordance with the Greater Sekhukhune District Municipality's Terms of Reference for the preparation of a Current Public Transport Record.

The following surveys were conducted:

- i) Facilities
- ii) Routes determination
- iii) Rank utilisation
- iv) Route utilisation
- v) Waiting times

The database was developed to assist with the interpretation of data. The report contains a summary of the information obtained from the Greater Sekhukhune District Municipality Current Public Transport Record (SDM-CPTR) Database. The purpose of the database is to complement the report, reduce its thickness and provide a tool that can be easily updated from time to time.

e) **Actual record of the public transport system in the Greater Sekhukhune District Municipality**

The report provides a summary of the information collected as part of the SDM-CPTR. It will give all stakeholders an overview of what is involved in public transport in the Greater Sekhukhune District Municipality with regard to facilities, the capacity utilisation of ranks and routes, the waiting times of passengers and vehicles, the operational vehicles and the number of trips made per operational vehicle. The following specific information is relevant:

- i) The facility surveys were conducted at taxi ranks, bus termini and train stations.
- ii) The facility surveys conducted indicate that the Greater Sekhukhune District Municipality has a total of 82 taxi facilities of which more than 75 per cent are informal.
- iii) There are three bus termini in the Greater Sekhukhune District Municipality. No commuter rail service is currently provided for passengers.
- iv) The findings of the route surveys conducted were that there were 190 (approximately 50% outward-bound and 50% inward-bound) taxi routes in the SDM: 15% are in the Elias Motsoaledi LM, 3% in Fetakgomo LM, 17% in Greater Marble Hall LM, 43% in Greater Tubatse LM and 22% in Makhuduthamaga LM.
- v) Of the subsidised bus routes in the SDM, 57% are in the Elias Motsoaledi LM and 43% in the Greater Marble Hall Municipality.
- vi) The main finding obtained from the analysis of route utilisation is that there is a vast oversupply of taxis on most routes in the SDM.

- vii) The results of waiting-time surveys only make sense if they are examined for the individual routes. The information on waiting times should be considered from the point of view of seeing whether passengers wait for taxis or whether the vehicles wait for more passengers before they can depart.
- viii) The route utilisation survey noted 1 462 taxis in the GSDM area. Furthermore 1 372 taxis were noted in the Elias Motsoaledi LM, 287 in Fetakgomo LM, 530 in the Greater Marble Hall LM, 1 463 in the Greater Tubatse LM and 1 083 in the Makhuduthamaga LM.
- ix) There were 28 buses in operation on the subsidised routes in the GSDM area.
- x) There are metered-taxi activities in the Tubatse LM and in operation in the GSDM area as well as 4 + 1 activities in Jane Furse.
- xi) Light delivery vehicles (LDVs) are utilised for learner trips as well as areas where the quality of the road is not good
- xii) Pedestrians are highly active at areas related to the following:
  - Road sections that serves as a link between the residential areas as well as economic active centres. A good examples of the last mentioned are Road R37 that links with the CBD of Burgersfort
  - Link between CBD and public transport facilities in the CBD of the respective local municipalities. A good example of the last mentioned is the link between the CBD of Marble Hall and the taxi rank as well as the link between the shopping centres and the taxi ranks in Jan Furse
  - Areas surrounding schools, hospitals and clinics.

f) **Recommendations**

Based on site visits, discussions with the respective role players as well as the calculations done, it is recommended that:

- i) The CPTR information that is available on the SDM-CPTR database should be used for developing an Operating Licensing Strategy (OLS) as guideline for the Operating Licence Board with regard to the issuing of new operating licences.
- ii) The CPTR information should furthermore be used for developing a Public Transport Plan for the Greater Sekhukhune District Municipality (SDM), which would guide the implementation of public transport projects and strategies, and could serve as input into the Integrated Transport Plan (ITP).
- iii) The taxi-related CPTR information should be made available to the taxi industry in order to assist them to plan their daily operations and to become more effective in their operations.
- iv) The SDM-CPTR should be updated at least every two years.

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## Chapter

### 1. INTRODUCTION AND BACKGROUND

This chapter contains the following:

- a) Terms of reference
- b) Purpose of the study
- c) Study area
- d) Outline of the report

#### 1.1 **TERMS OF REFERENCE**

Each district municipality that is a planning authority is responsible in terms of the National Land Transport Transitional Act (Act 20 of 2000) for preparing a Current Public Transport Record (CPTR) for its entire area. During June 2006 the Greater Sekhukhune District Municipality appointed the Siyazi-Khosa Joint Venture to compile the Greater Sekhukhune District Municipality's Current Public Transport Records (SDM-CPTR) for the 2006/2007 financial year.

#### 1.2 **PURPOSE OF THE STUDY**

Based on the *Government Gazette* published on 24 July 2002, the purpose of the CPTR is as follows:

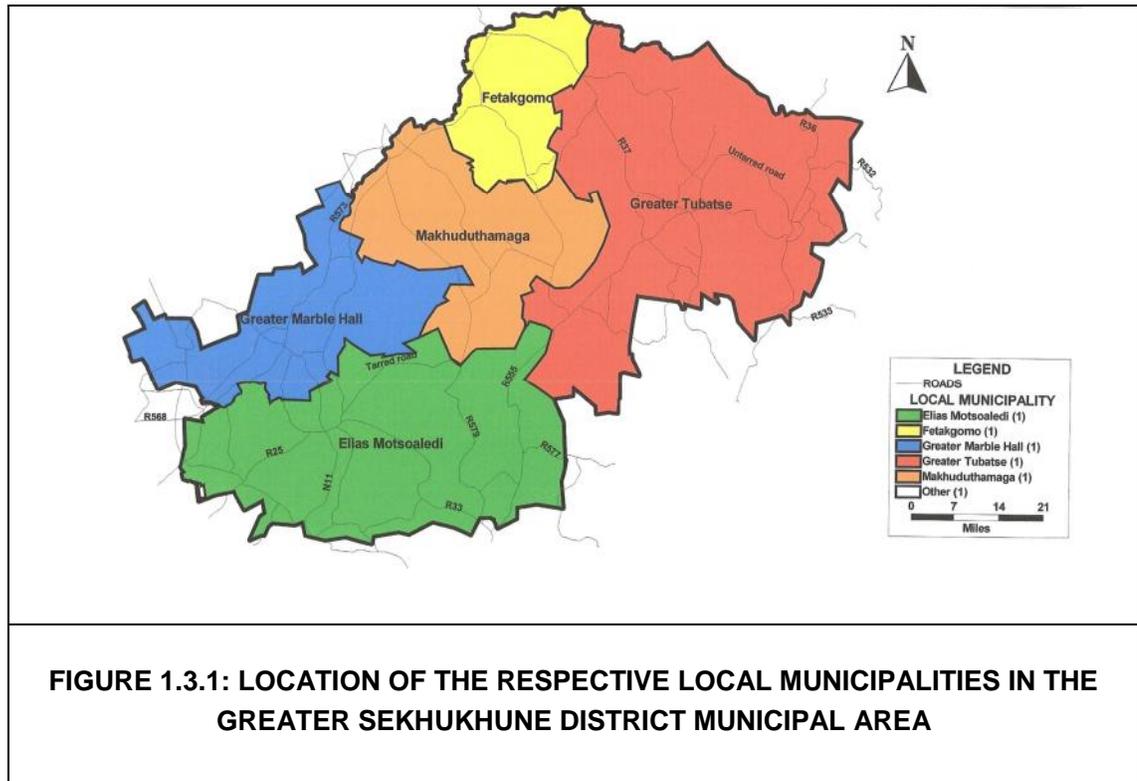
- a) "The purpose of the CPTR as outlined in section 23 of the Act, is to provide a record of public transport services, facilities and infrastructure, which will constitute the basis for the development of the operating licence strategies, rationalisation plans and integrated transport plans.
- b) In terms of section 18(1) of the Act, transport plans must form the transport component of the integrated development plans.
- c) All activities in collecting information for the CPTR must be guided by the question '*for what purpose do we need the information?*'
- d) Subject to the Act, these requirements and other relevant legislation such as local government legislation, the information collected should not be a wasteful status quo of the past, but should rather be defined and focused by the priorities established in the integrated development planning process and the transport planning process in the whole."

### 1.3 STUDY AREA

The scope of the work covers the whole area of jurisdiction of the Greater Sekhukhune District Municipality. The five Local Municipality areas covered include the –

- a) Greater Marble Hall Municipality;
- b) Elias Motsoaledi Municipality;
- c) Greater Tubatse Municipality;
- d) Fetakgomo Municipality; and
- e) Makhuduthamaga Municipality

None of the above-mentioned local municipalities has recently prepared or will prepare a CPTR for their respective municipal areas. Figure 1.3.1 indicates the location of the respective municipalities in the Greater Sekhukhune District Municipality.



### 1.4 OUTLINE OF THE REPORT

Chapter 1 serves as an introduction and summary. Chapter 2 contains a brief description of the approach to the study and explains how the study was carried out, and Chapter 3 elaborates on the methodology used for developing the CPTR. Chapter 4 provides more information about the actual compilation of the public transport records. The report concludes with a bibliography in Chapter 5, followed by the appendices.

## Chapter

### 2. STUDY APPROACH

The report contains two main sections, namely:

- a) Methodology used.
- b) Actual record of public transport.

The methodology for and compilation of the public transport records are discussed in more detail in the subsequent subsections.

#### 2.1 **METHODOLOGY USED**

The methodology used contained the following elements:

- a) Consultation and liaison
- b) Site visits
- c) Surveys
- d) Database development
- e) Capturing, dissemination and storage of data
- f) Preparation of report

#### 2.2 **ACTUAL RECORD OF PUBLIC TRANSPORT**

The actual record of public transport consisted of a survey of the following:

- a) Facilities
- b) Capacity utilisation of ranks
- c) Routes
- d) Route utilisation
- e) Waiting times
- f) Taxi-related information
- g) Comparison of the information of the Operating Licence Board with the information of the Registrar of Taxis
- h) Comparison of the information of the Operating Licence Board with the CPTR information.
- i) Comparison of information of the Board and the Registrar of Taxis with the CPTR information
- j) Bus facilities
- k) Bus operators
- l) Bus fleet
- m) Bus route and timetable information.

Figures B-1 to B-4 of Appendix B of this report are detailed base maps prepared to indicate all the public transport facilities in the Greater Sekhukhune District Municipal Area for the respective local municipalities. In addition, a database was prepared in Microsoft Access to support the basic information submitted as part of this report. This database will make it possible to update the SDM-CPTR on a continuous basis. Such updates will enable trends to be identified regarding the changes in passenger transport provision from year to year.

## Chapter

### 3. METHODOLOGY USED

Chapter 3 contains information about the following:

- a) Consultation and liaison
- b) Site visits
- c) Surveys
- d) Database development
- e) Capturing, dissemination and storage of data
- f) Preparation of report.

Information about these items is elaborated on in the subsections below.

#### 3.1 **CONSULTATION AND LIAISON**

Consultation and liaison are an integral part of the compilation of the SDM-CPTR. It is extremely important to involve all role players to ensure that the process is acceptable and reliable. The users of the system should have confidence in the process as well as in the results. The following role players were consulted:

- a) Limpopo Province Department of Transport – Public Transport Division
- b) Limpopo Province Department of Transport – Registrar of Taxis
- c) Limpopo Province Department of Transport – Operating Licence Board
- d) Greater Sekhukhune District Municipality
- e) Greater Sekhukhune District Taxi Council and Executive
- f) Local municipalities through the GSDM Transport Forum
- g) Bus industry
- h) Greater Sekhukhune District Transport Forum.

##### 3.1.1 *Limpopo Province Department of Transport – Public Transport Division*

The Limpopo Province Department of Transport plays an important role in the process of compiling the SDM-CPTR, for the following reasons:

- a) The Department is responsible for ensuring that well-planned and properly co-ordinated public transport services are provided in the Limpopo Province.
- b) The Department should ensure that all the CPTRs prepared for the respective districts in the province have compatible as well as usable information.

The Siyazi-Khosa Joint Venture consulted on a continuous basis with the Senior Manager of Public Transport in the SDM, and also at the respective Steering Committee meetings.

Provincial Steering Committee meetings were held and attended as follows:

- a) Meeting 1: 15 September 2006 at Thipese
- b) Meeting 2: 31 October 2006 at Polokwane
- c) Meeting 3: 30 November 2006.

### *3.1.2 Limpopo Province Department of Transport – Registrar of Taxis*

As the Registrar of Taxis plays an extremely important role in the Limpopo Province, it was necessary to consult the Registrar on a regular basis. One of the aims was to use the information obtained from the existing OLAS information system, that could be verified in the field and updated in the process.

### *3.1.3 Limpopo Province Department of Transport – Operating Licence Board*

The Operating Licence Board was consulted and informed continuously about what was being done and the progress made. In addition, OLAS information was obtained from the Limpopo Province Operating Licence Board.

## **3.2 GREATER SEKHUKHUNE DISTRICT MUNICIPALITY**

The client for the project, the Greater Sekhukhune District Municipality, was consulted on a continuous basis, not only to report progress but also to address the specific problems identified in the field. The following are some of the typical problems encountered during the preparation of the SDM-CPTR:

It is important to take note again of the main reasons causing delays as part of the project:

- a) The time required for arranging meetings with stakeholders in general and more specifically, the time required to invite representatives of taxi associations to meetings.
- b) The request from the taxi industry, namely that route utilisation surveys of the inward-bound routes should be conducted for a seven-day period, required additional time. The survey had initially been planned for a one-day period. The additional days entailed more administrative procedures.
- c) Capacity building among the queue marshals, which in particular highlighted the following problems:
  - i) Level of literacy
  - ii) Working hours and reliability
  - iii) Training of additional persons.
- d) Problems encountered because of the former cross-border municipalities, with specific reference to the Greater Tubatse Local Municipality Area.

- e) Taxi conflict in the Greater Sekhukhune District Municipality Area.

### *3.2.1 Taxi Councils of the Greater Sekhukhune District as well as the Western Region*

The Taxi Councils of the Greater Sekhukhune District as well as the Western Region of Mpumalanga played an important role in the compilation of the SDM-CPTR, because a large percentage of public transport in the Limpopo Province consists of taxis. All liaison with the taxi industry was conducted through the respective Taxi Councils.

In order to build the capacity of the members of the Taxi Councils, they were continuously consulted and informed. The knowledge that the members of the taxi industry have about the operations of the system in the area should never be underestimated. Table G-1 in Appendix G of the report contains a summary of all the taxi associations that are legally based in the GSDM Local Municipality Area.

Official meetings were held on –

- a) 30 August 2006 with the GSDM Taxi Council as well as with the Executives of the respective associations; and on
- b) 13 November 2006 with the Western Region Taxi Council of Mpumalanga.

### *3.2.2 Local municipalities*

The Greater Sekhukhune District Municipality informed the respective local municipalities in the Greater Sekhukhune District about the need to compile the SDM-CPTR. As part of the agenda of the Greater Sekhukhune District Transport Forum, all the respective local municipalities were informed. The respective local municipalities are actively involved in the Greater Sekhukhune District Transport Forum.

### *3.2.3 Bus industry*

There are two different types of bus operators in the Greater Sekhukhune District, namely:

- a) Subsidised operators
- b) Non-subsidised operators.

#### *3.2.3.1 Subsidised operators*

All subsidised bus operators in the Greater Sekhukhune District are shown in Table 3.1.7.1.1.1.

<b>Subsidised Bus Operator</b>	<b>Operational area</b>
Great North Transport	Greater Marble Hall LM
Great North Transport	Elias Motsoaledi LM

Source: Great North Transport

### 3.2.3.2 *Non-subsidised operators*

There are four (4) non-subsidised bus operators in the Greater Sekhukhune District Municipal Area. Since these buses are not used for commuter transport, no detailed information was obtained about these operations. The distribution of these operators with regard to the respective local municipalities in the Greater Sekhukhune District is shown in Table 3.1.7.2.1 below.

<b>Municipality of operation</b>	<b>Location of operation</b>	<b>Type of operations</b>
Great North Transport	Greater Groblersdal	Casual and scholar passengers
Great North Transport	Greater Marble Hall	Casual and scholar passengers
Great North Transport	Greater Tubatse	Casual and scholar passengers
Mahlangu Bus Service	Greater Tubatse	Mine and scholar passengers
Sekhukhune Express	Greater Tubatse	Mine passengers
Thembaletu Bus Company	Greater Tubatse	Mine and scholar passengers

### 3.2.4 *Greater Sekhukhune District Transport Forum*

The Greater Sekhukhune District Transport Forum is the core of all transport-planning processes in the Greater Sekhukhune District, and it was therefore important that the project should be discussed at this forum since the information would eventually be utilised by this forum's members. Detailed discussions were held with the Greater Sekhukhune District Transport Forum (SDTF) on the following dates:

- a) Meeting 1: 19 July 2006
- b) Meeting 2: 30 October 2006

It was decided at the October SDTF meeting that a steering committee as well as a technical committee would play an integral role in the process of compiling the CPTR.

### 3.2.5 Local Transport Forums

The role of a local transport forum is vital for ensuring sustainable and reliable public transport in any local municipality. Since not all of the local transport forums are fully active in the Limpopo Province, it is the responsibility of the respective representatives of the local municipalities to communicate the information discussed at the Greater Sekhukhune District Transport Forum to the respective local municipalities.

### 3.2.6 Spoornet

Spoornet is the owner of the entire railway system in the Greater Sekhukhune District area. The information about trains was obtained from the draft report: *Feasibility study on rail development in the Limpopo Province, August 2006*.

## 3.3 SITE VISITS

Site visits to the different local public transport facilities were arranged so that the study team could acquaint themselves with the conditions, circumstances, operational practices and all practical issues that would be essential for the planning process.

Site visits to all the public transport facilities for the different modes were conducted after consultation and liaison with the following parties:

- a) Taxi industry
- b) Bus industry
- c) Spoornet.

Site visits have the following purposes:

- a) To familiarise the consulting team with the circumstances at the facility
- b) To meet the important role players at the public transport facilities
- c) To plan the surveys to be conducted at the public transport facilities.

Section 4.3 contains more details of the surveys of facilities.

## 3.4 SURVEYS

Once all the necessary arrangements and liaison had been completed, planning to conduct the surveys commenced. The planning process was communicated to and discussed with the Greater Sekhukhune District Municipality as well as the relevant role players from the public transport industry.

The surveys were performed in accordance with the Greater Sekhukhune District Municipality's Terms of Reference for the preparation of a Current Public Transport Record. A strictly controlled method for data collection was used. Spot checks were done to ensure that surveys were being conducted correctly. The Siyazi-Khosa JV added some value to the SDM-CPTR project, as some of the information collected was not specified in the Terms of Reference. Examples of this information are as follows:

- a) Additional information about the facilities
- b) Seven-day route utilisation information for inward-bound routes
- c) Detailed calculations were done with the captured information.

The following surveys were conducted:

- a) Facility
- b) Rank utilisation
- c) Routes determination
- d) Route utilisation
- e) Waiting times.

The above-mentioned surveys are described in detail below, and Appendix A-1 contains definitions of taxi ranks; pick-up points, holding areas, routes and corridors.

#### *3.4.1 Facility surveys*

The purpose of facility surveys is to determine and facilitate the following:

- a) The physical location of facilities
- b) The attributes of the facilities
- c) Communication of the information to role players in the Greater Sekhukhune District so that they can make informed decisions about the upgrading of rank facilities.

The following includes some of the specific information collected:

- a) The location of facilities, for example the geographical co-ordinates (latitude and longitude of the positions of facilities) and their physical addresses, including a photo or video of the facility.
- b) Type and status of facilities so as to indicate whether the facility is formal or informal as well as to distinguish the type of transport mode making use of the facility.
- c) The condition of facilities was assessed to identify the infrastructure items needed or that should be obtained to upgrade the facilities.
- d) All amenities at facilities were recorded and comments made on the condition of these amenities.
- e) Facility dimensions were recorded that could serve as good input into the taxi recapitalisation project for the taxi industry.

- f) The contact details of rank and association officials were taken to ensure that communication could be maintained in preparation for the surveys and for other future purposes.

More detailed information about the facility surveys is given in section 4.1 of this report and is also available in the SDM-CPTR database. Table B-1 of Appendix B of this report contains a summary of the Public Transport Facilities Survey in the Greater Sekhukhune District.

#### *3.4.2 Capacity utilisation of ranks*

The purpose of rank utilisation surveys is to determine whether the rank has sufficient capacity to accommodate the taxis that operate there. During these surveys, the following information was collected:

- a) The total number of facility bays, i.e. loading, holding or combined.
- b) The count of the operational vehicles on the rank for specific time intervals (15 minutes).

The surveys were conducted for the morning (AM peak), midday peak and afternoon (PM peak) respectively. More detailed information about rank utilisation is given in section 4.2 of this report and is also available in the SDM-CPTR database. Table C-1 of Appendix C of this report contains a summary of the rank utilisation surveys for the Greater Sekhukhune District.

#### *3.4.3 Route determination*

Route determination is vital to gain an understanding of the operational methods of the public transport industry. It is a process for collecting the route information and for giving a detailed description of the routes or networks on which public transport services operate. The route information that is usually collected includes specifying the origin and destination of the route as well as intermediate points which could be the relevant, such as street names, road numbers, suburbs, towns, villages and points where passengers are picked up and dropped off.

After holding discussions with the relevant role players, it was decided that the routes as verified by the Limpopo Province Registrar of taxis should be used as the base information for the route determination process.

The route determination process started with the facility visits and continued throughout the project. The Siyazi-Khosa Joint Venture furthermore captured the taxi route data electronically. This capturing was done at the team's own initiative and is probably one of the very few done in South Africa. The details of the bus routes are contained in the database.

Tables D1-1 and D1-2 of Appendix D of this report respectively contain a summary of the survey of Public Transport Routes in the Greater Sekhukhune District for the taxis and the buses. Section 4.3 of this report as well as the SDM-CPTR database contains more details about the route information.

#### *3.4.4 Route utilisation*

The purpose of route utilisation surveys is to determine how frequently a particular taxi uses a particular route. This information will be extremely important when determining the route Operating Licensing Strategy (OLS) because it will assist the local authority to make informed decisions about the provision of operating licences.

The following information was collected as part of this survey:

- a) Route number, rank ID, fare for the trip
- b) The time when the trip starts
- c) Vehicle's registration number
- d) Capacity of the vehicle
- e) Number of passengers in the taxi when it departs.

The route utilisation surveys were conducted in the peak period during which the specific point was fully operational. Most of the ranks linked to the Central Business District (CBD) of local municipalities are active during the PM (afternoon) peak whereas the ranks located close to residential areas are active during the AM (morning) peak. Owing to the operational methods of taxis during the AM peak, when passengers are picked up along the route or, as it is generally called, taxis are "touting" for passengers, strategic points had to be selected to obtain a combined and representative result for the area. The route utilisation surveys were conducted accordingly. More detailed information about route utilisation is given in section 4.4 of this report and is also available in the SDM-CPTR Database. Table E-1 of Appendix E of this report contains a summary of the route utilisation surveys.

#### *3.4.5 Waiting times*

The purpose of these surveys is to determine the balance between the supply of and demand for transport in the taxi industry. The calculation of waiting times requires the following information to be collected:

- a) The route number
- b) Passengers' waiting time in a queue
- c) Passengers' waiting time in a taxi
- d) Number of taxis in a taxi queue when the taxi departs
- e) Number of passengers in a taxi when a taxi departs
- f) A vehicle's capacity
- g) The vehicle's registration number.

The surveys were conducted at the same time as the survey on route utilisation. It is, however, important to note that the operational methods that taxis in the rural areas used during the AM peak made it impossible to survey the waiting times for all operations during the morning peak. More detailed information is given in section 4.5 of this report and is also available in the SDM-CPTR Database. Appendix F of this report contains a summary of the waiting-time survey.

### 3.5 **DATABASE DEVELOPMENT**

The report contains a summary of the information obtained from the SDM-CPTR Database. The purpose of the database is to assist in the following manner:

- a) Complement the report
- b) Reduce the number of pages of the report
- c) Interpret and manipulate the data
- d) Provide a tool that can easily be updated from time to time
- e) Provide a tool that can easily compare the CPTR information with the OLAS information.

The aim was to also save paper by not providing the information in hard copy, but instead submitting the information by means of the database.

The Siyazi-Khosa Joint Venture will provide training for the official/s who would make use of the database. The database was developed in Access 2003 and has two main parts:

- a) Captured data
- b) Output.

The subsequent sections of the report discuss these two parts of the database in more detail.

#### 3.5.1 *Captured data*

The captured-data part of the database refers to the actual information that was obtained by means of field surveys, interviews and existing reports. This part of the database consists of the following elements:

- a) SDM-CPTR information
- b) Information from the Limpopo Registrar of Taxis Administration System (RAS)
- c) Limpopo Province Operating Licence Information (OLAS).

The subsequent subsections of the report discuss the elements of the captured-data part of the database in more detail.

### 3.5.1.1 *SDM-CPTR information*

The two major modes that form part of the Greater Sekhukhune District Municipality CPTR are the –

- a) taxi mode, and
- b) the bus mode.

In terms of the taxi industry, the following CPTR information was captured:

- a) Facilities
- b) Capacity utilisation of ranks
- c) Routes
- d) Route utilisation
- e) Waiting times.

Information was obtained from the bus industry, which is much better organised than the minibus-taxi industry, about the following:

- a) Facilities
- b) Operators
- c) Fleets
- d) Routes and timetables.

### 3.5.1.2 *Limpopo Registrar of Taxis Administration System (RAS)*

The following information could typically be obtained from the Limpopo RAS:

- a) Rank information
- b) Taxi operators' information
- c) Verified route information
- d) Vehicle registration information.

### 3.5.1.3 *Limpopo Province Operating Licence Information (LPTS)*

The following information could typically be obtained from the Limpopo LPTS:

- a) Starting point of route (origin, A point)
- b) End of route (destination, B point)
- c) Certificate number
- d) Issue date
- e) ID number of operator
- f) Trade name
- g) Initials
- h) Vehicle's registration number.

#### 3.5.1.4 Cross-checks

To ensure that the above-mentioned captured information would be reliable and useable, it was necessary to develop crosschecks for the following:

- a) Facilities
  - i) A rank mentioned in the facility information but not in rank utilisation information
  - ii) A rank mentioned in the facility information but not in the route information as an origin rank
  - iii) A rank mentioned in the facility information but not in the route information as a destination rank.
  
- b) Rank capacity utilisation
  - i) A rank mentioned in the rank utilisation information but not in the in facility information.
  
- c) Routes
  - i) A rank mentioned as an origin rank in the route information but not in the facility information.
  - ii) A rank mentioned as a destination rank in the route information but not in the facility information.
  - iii) A route mentioned in the route information but not in the route utilisation information.
  - iv) A subroute mentioned in the route information but not in the waiting-time information.
  
- d) Route utilisation
  - i) A route mentioned in the route utilisation information but not in the route information.
  - ii) A subroute mentioned in the route utilisation information but not in the route information.
  
- e) Waiting times
  - i) A route mentioned in the waiting-time information but not in the route information.
  - ii) A subroute mentioned in the waiting-time information but not in the route information.

### 3.5.2 Output

The purpose of the output data is to provide a set of information that is –

- a) non-editable;
- b) includes basic calculations;
- c) provides information per district municipality, local municipality, facility or route; and
- d) can be exported to other Microsoft-based programs for use in reports and discussions.

The following main sections were developed as part of the output information:

- a) Taxi output
- b) Bus output

The following subsections elaborate on these two kinds of output.

#### 3.5.2.1 Taxi output

The following taxi output is relevant:

- a) Facilities
  - i) All taxi facility information
  - ii) All taxi facility information for the Greater Sekhukhune District Municipality
  - iii) All taxi facility information for a specific local municipality
  - iv) All taxi facility information for a specific facility code number.
- b) Capacity utilisation of ranks
  - i) All taxi rank utilisation information
  - ii) All taxi rank utilisation information for Greater Sekhukhune District Municipality
  - iii) All taxi rank utilisation information for a specific local municipality
  - iv) All taxi rank utilisation information for a specific facility's code number.
- c) Routes
  - i) All taxi route information
  - ii) All taxi route information for the Greater Sekhukhune District Municipality
  - iii) All taxi route information for a specific local municipality
  - iv) All taxi route information for a specific facility's code number
  - v) All taxi route information for a specific main route code.
- d) Route utilisation
  - i) Taxi route utilisation results for all main routes
  - ii) Taxi route utilisation results for all subroutes.

- e) Waiting times
  - i) All taxi waiting-time information
  - ii) All taxi waiting-time information for the Greater Sekhukhune District Municipality
  - iii) All taxi waiting-time information for a specific local municipality
  - iv) All taxi waiting-time information for a specific facility's ID code
  - v) Taxi waiting-time information for a specific route.
  
- f) Taxi-related information
  - i) Taxi associations
  - ii) Number of minibus-taxi vehicles in the Greater Sekhukhune District Municipality
  - iii) Number of minibus-taxi vehicles per local municipality.
  
- g) Comparisons of minibus-taxi information
  - i) Operating licence information versus Registrar of Taxis information
  - ii) Operating licence information versus CPTR information
  - iii) Registrar of Taxis information versus CPTR information.

### 3.5.2.2 *Bus output*

The following bus output is relevant:

- a) Bus facilities
  - i) All bus facility information
  - ii) All bus facility information for the Greater Sekhukhune District Municipality
  - iii) All bus facility information for a specific local municipality
  - iv) All bus facility information for a specific facility's code number.
  
- b) Bus operators
  - i) All bus operator information
  - ii) All bus operator information for the Greater Sekhukhune District Municipality
  - iii) All bus operator information for a specific local municipality.
  
- c) Bus fleet
  - i) All bus fleet information
  - ii) All bus fleet information for the Greater Sekhukhune District Municipality
  - iii) All bus fleet information for a specific local municipality.
  
- d) Bus route and timetable information
  - i) All bus route and timetable information

- ii) All bus route and timetable information for the Greater Sekhukhune District Municipality
- iii) All bus route and timetable information for a specific local municipality
- iv) All bus route and timetable information for a specific facility's code number.

### **3.6 CAPTURING, DISSEMINATION AND STORAGE OF DATA**

Data capturing for the SDM-CPTR Database is a continuous process. As already stated, the database has been prepared in Access 2003. The information captured that does not yet appear on the existing base-map will be transferred to the base-map in due course of time.

Back checking, clearing and quality control of data are part of the capturing process. In section 3.4 it can be noted that this process is part of the SDM-CPTR Database.

### **3.7 PREPARATION OF REPORT**

It is important to record the methods used, the results and the way forward in a report and also to communicate the findings of the project to the stakeholders to ensure that all will take note of the findings and know about the information. The communication process is essential for building the stakeholders' confidence in the information.

## Chapter

### 4. ACTUAL RECORD OF THE PUBLIC TRANSPORT SYSTEM IN THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY

The purpose of Chapter 4 is to provide a summary of the information collected as part of the SDM-CPTR. The summarised information will allow all stakeholders to obtain an overview of what is involved in public transport in the Greater Sekhukhune District Municipality. Chapter 4 contains specific information about the following:

- a) Facilities
- b) Capacity utilisation of ranks
- c) Routes
- d) Route utilisation for taxis
- e) Waiting times for taxis
- f) Operational vehicles
- g) Comparison of information from the Operating Licence Board with information from the Registrar of Taxis
- h) Comparison of information from the Operating Licence Board with the CPTR information
- i) Comparison of information from the Board and Registrar of Taxis with the CPTR information.

The subsequent subsections elaborate on the above-mentioned information.

#### 4.1 FACILITIES

The facility surveys were conducted for the following types of facilities:

- a) Taxi ranks
- b) Bus termini.

The findings of the surveys of the above-mentioned facilities are given in summarised form in the subsections below. Appendix B contains more detailed information about the public transport facilities.

##### 4.1.1 Taxi ranks

The findings from the facility surveys conducted for the Greater Sekhukhune District Municipality as represented in Table 4.1.1.1 show that the GSDM has a total of 82 taxi facilities. Table 4.1.1.1 furthermore shows the number of taxi facilities situated in the different local municipality areas, the percentage of formal taxi facilities and the percentage of taxi facilities per municipal area in relation to the total number of taxi facilities in the Greater Sekhukhune District Municipality. Table 4.1.1.1 indicates that nearly half of the ranks in the GSDM are in the Greater Tubatse LM, followed by Makhuduthamaga with 20%.

<b>TABLE 4.1.1.1: TAXI FACILITY STATISTICS FOR THE GSDM AREA</b>			
<b>Local municipality</b>	<b>Number of taxi facilities</b>	<b>% Formal</b>	<b>% in relation to SDM</b>
Elias Motsoaledi	10	50%	12%
Fetakgomo	8	25%	10%
Greater Marble Hall	11	9%	13%
Greater Tubatse	37	19%	45%
Makhuduthamaga	16	38%	20%
<b>Total for SDM</b>	<b>82</b>	<b>100%</b>	<b>100%</b>

In terms of taxi facilities in the Greater Sekhukhune District Municipal Area, the following information is also relevant:

- a) 75% of taxi facilities are on-street facilities
- b) 74% of taxi facilities are informal facilities
- c) 12% of taxi facilities have lighting
- d) 19% of taxi facilities are paved
- e) 2% of taxi facilities have public telephones
- f) 11% of taxi facilities have offices
- g) 17% of taxi facilities have shelters
- h) 15% of taxi facilities have ablution blocks.

Table B-1 of Appendix B of this report contains more information about taxi facilities.

#### 4.1.2 *Bus termini*

Bus facilities in the Greater Sekhukhune District Municipality are limited to three main bus termini and then the many loading and off-loading bus stops through the district. The bus termini are in general not well provided with facilities. See Table B-2 for more details about the facilities provided at bus termini.

#### 4.1.3 *Train stations*

There is currently no rail commuter service in the GSDM area.

#### 4.1.4 *Metered taxis*

There are a limited number of metered taxis operating in the GSDM area. Metered taxis were observed in the following areas:

- a) Greater Tubatse
- b) A large number of 4+1 taxis in Jane Furse.

## 4.2 CAPACITY UTILISATION OF RANKS

Facility utilisation is described in terms of the following parameters:

- a) **Frequency**, which implies the number of taxis using the facility in specified morning or evening peaks for each type of public transport service or off-peak periods for stand-alone holding facilities.
- b) **Facility capacity**, which implies the number of loading bays available.
- c) **Utilisation**, which implies the average number of bays occupied in the facility.

It is extremely important to note that a large number of facilities in the Greater Sekhukhune District Municipality are informal facilities. In practice, this implies that it is virtually impossible to determine the extent of rank utilisation. In order to indicate the burden that an informal facility places on the public transport system, the capacity of informal facilities was indicated as 1. Table C-1 indicates the average capacity utilisation of taxi ranks respectively for the –

- a) AM peak between 06:00 and 10:00
- b) MID peak between 10:00 and 14:00
- c) PM peak between 14:00 and 18:00.

More detailed information per 15-minute interval is available in the SDM-CPTR database.

## 4.3 ROUTES

As part of the process of capturing the route information, it was possible to determine that the verified routes provided by the Limpopo Province Department of Transport have not been 100% accurately described.

Route surveys were conducted for the following types of modes:

- a) Taxi
- b) Bus
- c) Train
- d) Light Delivery Vehicles.

These modes are discussed in more detail in the subsequent subsections of this report.

### 4.3.1 Taxi routes

Based on the surveys conducted for the SDM-CPTR, it is crucial to note that socio-economic factors in the province make it completely uneconomical to restrict a taxi operator to one particular road in order to fulfil his commitments as a service provider. The typical socio-economic factors influencing the operational methods of the taxi industry are as follows:

- a) The widely spread distribution of villages

- b) The low level of income in villages
- c) The low level of employment in the Limpopo Province, with specific reference to villages.

The taxi industry implemented a rotation system to ensure that all operators could earn a living. However, it is important that taxi operators should only be permitted to operate between an A and B point, although it should be possible for them to operate on different roads to maintain services on the route.

The findings of the route surveys that were conducted, were that 190 taxi routes were used in the Greater Sekhukhune District but the outward-bound and inward-bound routes were separately described. Table 4.3.1.1 indicates that 43% of the routes were in the Greater Tubatse Local Municipality, followed by 22% of the routes in the Makhuduthamaga LM. Table 4.3.1.1 gives a more detailed breakdown of the routes per local municipality.

<b>TABLE 4.3.1.1: DISTRIBUTION OF TAXI ROUTES PER LOCAL MUNICIPALITY IN THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY</b>		
<b>Local municipality</b>	<b>Number of routes</b>	<b>% in relation to SDM</b>
Elias Motsoaledi	28	15%
Fetakgomo	6	3%
Greater Marble Hall	32	17%
Greater Tubatse	82	43%
Makhuduthamaga	42	22%
<b>Total SDM</b>	<b>190</b>	<b>100</b>

Table D1-1 of Appendix D-1 of this report contains a summary of the taxi routes in the Greater Sekhukhune District, indicating the following:

- a) Route number
- b) Association
- c) Point A
- d) Point B
- e) Local municipality.

More detailed information is available as part of the SDM-CPTR Database.

#### 4.3.2 Bus routes

Information about routes was easily available as the bus industry is formalised. The information about routes for subsidised services was quite accurate.

Based on the information obtained about bus routes, there are 28 subsidised bus routes in the Greater Sekhukhune District Municipality. Table 4.3.2.1 gives a more detailed breakdown of the bus routes per local municipality in the Greater Sekhukhune District Municipality.

<b>Local municipality</b>	<b>Number of routes</b>	<b>% in relation with SDM</b>
Elias Motsoaledi	16	57%
Greater Marble Hall	12	23%
<b>Total SDM</b>	<b>28</b>	<b>100</b>

Table D2-1 of Appendix D of this report contains a list of bus routes in the Greater Sekhukhune District Municipality, indicating the following:

- a) Route number
- b) Operator
- c) Point A
- d) Point B
- e) Local municipality
- f) Fares.

More detailed information is available as part of the SDM-CPTR Database with specific reference to the bus timetables and fare structures.

#### 4.3.3 Train routes

At present there is no rail commuter service in the GSDM area. The information about trains was obtained from the draft report: *Feasibility Study on rail development in the Limpopo Province, August 2006*.

#### 4.3.4 Light Delivery Vehicles

Table 4.3.4.1 indicates a list of routes that are served by light delivery vehicles in the GSDM Area.

<b>Origin</b>	<b>Destination</b>
Marishane	Mapurunyane
Masemola	Sezolea
Mphanana Cross	Mphanana
Ga Masha	Maseven
Leporogong	Kutullo
Monsterlus Koperasie	Kgaphamadi
Sephaku	Sterkfontein
Luckan	Legolaneng
Luckan	Sterkfontein
Keerom	Mablogoom

#### 4.4 ROUTE UTILISATION FOR TAXIS

In order to conduct the route utilisation survey, the following figures from the route utilisation data were calculated for a specific route and for a specific time interval:

- a) Number of passengers
- b) Number of seats
- c) Percentage utilisation of seats
- d) Number of trips
- e) Average occupation per vehicle
- f) Unique number of taxi trips
- g) Average number of trips per taxi.

Tables E-1 and E-2 of Appendix E of this report respectively provide information about the above-mentioned route utilisation for the following peaks for all the main routes captured:

- a) AM peak from 06:00 to 09:00
- b) PM peak from 15:00 to 18:00.

Table 4.4.1 provides the average number of trips per taxi for each municipality in the Greater Sekhukhune District Municipality for the AM and PM peaks respectively.

<b>TABLE 4.4.1: AVERAGE NUMBER OF TAXI TRIPS PER TAXI IN THE GREATER SEKHUKHUNE DISTRICT BY LOCAL MUNICIPALITY</b>		
<b>Local municipality</b>	<b>AM PEAK (06:00 to 09:00)</b>	<b>PM PEAK (15:00 to 18:00)</b>
Elias Motsoaledi	1,41	1,26
Fetakgomo	1,12	1,0
Greater Marble Hall	1,36	1,19
Greater Tubatse	1,40	1,23
Makhuduthamaga	1,32	1,25
<b>Average for District</b>	<b>1,36</b>	<b>1,23</b>

The summarised information in Tables E-1 and E-2 show the following:

- a) During the AM peak between 06:00 and 09:00 a total of 18 575 passengers are transported in the GSDM area per day.
- b) During the PM peak between 15:00 and 18:00 a total of 11 156 passengers are transported in the GSDM area.
- c) Tables 4.4.2 and 4.4.3 respectively indicate information related to the 10 routes, with the most trips per vehicle during the morning peak as well as the afternoon peak.
- d) The economic viability for a high percentage of taxis was very low. This was the case for the number of trips per taxi for most of the routes.

To conclude, it is possible to determine the route utilisation for any time period by means of the database, and therefore far more detailed information is available as part of the database.

A copy of the route census for buses conducted is shown in Appendix E.

<b>TABLE 4.4.2: SUMMARY OF TEN TAXI ROUTES WITH THE MOST TRIPS PER TAXI (AM peak between 06:00 and 09:00)</b>										
<b>Main route</b>	<b>Description of main route</b>	<b>Survey period (days)</b>	<b>No of passengers during period</b>	<b>No of passengers per peak period</b>	<b>No of seats</b>	<b>% of seats used</b>	<b>No of trips</b>	<b>Average occupation per vehicle</b>	<b>Unique taxi trips</b>	<b>Average No of trips per taxi</b>
L-R0042F-S	DRESDEN to BURGERSFORT	1	77	77	150	51	11	7.00	3	03,67
TEMP-43F-S	SEVEN STAD to MARBLE HALL	1	242	242	281	86	19	12.70	6	03,17
L-R0001F-S	PENGE to BURGERSFORT	1	243	243	304	80	21	11.60	7	03,00
L-R0007F-S	ALVERTON to BURGERSFORT	1	992	992	994	100	68	14.60	23	02,96
L-R0030F-S	MANOKE to BURGERSFORT	1	511	511	1082	47	99	5.20	35	02,83
TEMP-34R-S	GROBLERSDAL to JOHANNESBURG	6	120	20	120	100	8	15.00	3	02,67
L-R0045F-S	TAUNG to BURGERSFORT	1	224	224	384	58	29	7.70	11	02,64
TEMP-55-S	MAMPANE to PRETORIA	1	457	457	758	60	52	8.80	20	02,60
L-R0046R-S	BURGERSFORT to GA-MAKOFANE	6	105	18	105	100	7	15.00	3	02,33
TEMP-42R-S	GROBLERSDAL to MIDDELBURG	6	102	17	105	97	7	14.60	3	02,33

<b>TABLE 4.4.3: SUMMARY OF TEN TAXI ROUTES WITH THE MOST TRIPS PER TAXI (PM peak between 15:00 and 18:00)</b>										
<b>Main route</b>	<b>Description of main route</b>	<b>Survey period (days)</b>	<b>No of passengers</b>	<b>No of passengers per peak period</b>	<b>No of seats</b>	<b>% of seats used</b>	<b>No of trips</b>	<b>Average occupation per vehicle</b>	<b>Unique taxi trips</b>	<b>Average No of trips per taxi</b>
TEMP-35R-S	GROBLERSDAL to MOTETEMA	6	1777	296	1777	100	122	14.6	45	02,71
L-R0045F-S	TAUNG to BURGERSFORT	1	206	206	301	68	22	09.4	9	02,44
TEMP-4R-S	PHOKWANE to MASIHLALENI	1	102	102	102	100	7	14.6	3	02,33
L-R0029R-S	BURGERSFORT to NTSWANENG	6	942	157	942	100	65	14.5	28	02,32
L-R0030F-S	MANOKE to BURGERSFORT	1	288	288	948	30	83	03.5	37	02,24
L-R0061R-S	JANE FURSE to GROBLERSDAL	6	3523	587	3569	99	240	14.7	113	02,12
TEMP-84F-S	LETLAPIRWANA to MATIBIDI	1	93	93	147	63	14	06.6	7	02,00
L-R0127R-S	MARBLE HALL to MAMPANA	6	361	60	382	95	28	12.9	14	02,00
L-R0033R-S	ORIGSTAD to LEBOENG/MANOUTSA	6	33	5.5	56	59	4	08.3	2	02,00
TEMP-6R-S	PHOKWANE to MABINDANE	6	280	46.66667	280	100	20	14.0	10	02,00

#### 4.5 **WAITING TIMES FOR TAXIS**

Detailed calculations were done on waiting times, using the surveyed information. The following is typical of the information available per main route for a specific time interval:

- a) Survey size
- b) Maximum waiting time for passenger in queue
- c) Average waiting time for passenger in queue
- d) Maximum waiting time for passenger in vehicle
- e) Average waiting time for passenger in vehicle
- f) Maximum total waiting time for passenger
- g) Average total waiting time for passenger
- h) Maximum number of passengers left in queue
- i) Average number of passengers left in queue
- j) Maximum number of vehicles remaining in queue
- k) Average number of vehicles remaining in queue.

The above-mentioned detailed waiting-time calculations were conducted for each local municipality. Tables F-1 to F-4 of Appendix F of this report contain the respective results for the following:

- a) Table F-1: Greater Marble Hall Municipality
- b) Table F-2: Elias Motsoaledi Municipality
- c) Table F-3: Greater Tubatse Municipality
- d) Table F-4: Fetakgomo Municipality
- e) Table F-5: Makhuduthamaga Municipality.

Table F-6 of Appendix F indicates the results for the Greater Sekhukhune District Municipality. In conclusion, the SDM-CPTR database contains all the detailed information about waiting times by specific routes.

Table 4.5.1 presents a summary of the data for the average waiting times in the queues and in the vehicles for the time intervals between 15:00 and 18:00 for the different local municipalities. Table 4.5.1 clearly indicates that there is generally an over-supply of minibus-taxi services in the Greater Sekhukhune DM.

The information about waiting times will be used in more detail when developing the OLS for the Greater Sekhukhune District Municipality.

**TABLE 4.5.1: AVERAGE QUEUES AND WAITING TIMES IN QUEUES AND IN VEHICLES FOR DIFFERENT TIME INTERVALS BY LOCAL MUNICIPALITY BETWEEN 14:00 AND 17:00**

Time interval	Elias Motsoaledi			Fetakgomo			Greater Marble Hall			Greater Tubatse			Makhuduthamaga		
	Average queues		Average total waiting time passengers	Average queues		Average total waiting time passengers	Average queues		Average Total waiting time passengers	Average queues		Average total waiting time passengers	Average queues		Average total waiting time passengers
	Pas-sengers	Vehicles		Pas-sengers	Vehicles		Pas-sengers	Vehicles		Pas-sengers	Vehicles		Pas-sengers	Vehicles	
14:00-15:00	3,6	11,1	00:35	5,7	2,7	01:01	1,8	5,1	01:07	2,6	2,5	00:20	2,2	3,5	00:32
15:00-16:00	3,4	10,4	00:20	2,3	1,0	00:22	0,5	5,1	00:43	3,8	3,3	00:18	1,4	3,0	00:21
16:00-17:00	3,3	9,1	00:17	2,3	1,0	00:05	0,5	2,2	00:25	5,6	2,9	00:10	2,4	2,1	00:23

#### 4.6 OPERATIONAL VEHICLES

One of the most frequently asked questions concerns the number of operating vehicles for a specific area. It is important to note that the numbers determined as part of this report reflect only the information obtained in the field for a specific peak period, as part of the SDM-CPTR, with specific reference to the minibus-taxi industry. It is therefore possible that for various reasons a taxi operator might not have operated on the day when the survey was conducted and therefore such an operator would not have been included in the calculations. It is furthermore important to take note that taxis operating from other provinces were also counted as part of the surveys. The implication is that the number of vehicles may not necessarily be a true reflection of the number of operators in the area.

Information about the number of operational vehicles is therefore available for –

- a) minibus-taxis, and
- b) buses.

A total of 4 261 unique taxis were observed in the GSDM area. Table 4.6.1.1 below shows the total number of different taxis operating in the Greater Sekhukhune District Municipality for each of the local municipalities. It is important to note that some of the vehicles were observed in more than one local municipality, because the A and B points of the routes are in different local municipal areas. The result is that the sum of the operational vehicles for all the respective municipalities is higher than the number of operational vehicles in the SDM.

<b>TABLE 4.6.1: OPERATIONAL TAXIS IN THE GREATER SEKHUKHUNE DISTRICT MUNICIPAL AREA AND LOCAL MUNICIPALITIES</b>	
<b>Local Municipality</b>	<b>Number of taxis</b>
Elias Motsoaledi	1372
Fetakgomo	287
Greater Marble Hall	530
Greater Tubatse	1463
Makhuduthamaga	1083
<b>Total</b>	<b>4735</b>

There are subsidised buses in operation in the SDM: 16 in the Elias Motsoaledi and 12 in the Greater Marble Hall LM.

The following information about operators appears in Appendix G of the report:

- a) Table G-1: Taxi associations operating in the Greater Sekhukhune District Municipality, based on the surveys conducted.
- b) Table G-2: Subsidised and non-subsidised bus operators in the Greater Sekhukhune District Municipality.

**4.7 COMPARISON OF INFORMATION OF OPERATING LICENCE BOARD WITH INFORMATION OF THE REGISTRAR OF TAXIS**

No operating licence (LPTS) and Registrar of Taxis (RAS) information was electronically available from the Limpopo Province Department of Transport. It was therefore not possible to make a comparison at this stage.

**4.8 COMPARISON OF INFORMATION OF OPERATING LICENCE BOARD WITH CPTR INFORMATION**

No operating licence (LPTS) and Registrar of Taxis (RAS) information was electronically available from the Limpopo Province Department of Transport. It was therefore not possible to make a comparison at this stage.

**4.9 COMPARISON OF INFORMATION OF BOARD AND REGISTRAR OF TAXIS WITH CPTR INFORMATION**

No operating licence (LPTS) and Registrar of Taxis (RAS) information was electronically available from the Limpopo Province Department of Transport. It was therefore not possible to make a comparison at this stage.

## 5. FINDINGS AND RECOMMENDATIONS

### 5.1 FINDINGS FROM THE CPTR PROCESS

The main findings of the CPTR for the Greater Sekhukhune District Municipality are as follows:

a) Facilities

- i) There is a lack of formally constructed public transport facilities, as more than 75% of the 82 taxi facilities are informal.
- ii) The following figures illustrate the state of the ranks in the GSDM area:
  - 75% of taxi facilities are on-street facilities
  - 74% of taxi facilities are informal facilities
  - 12% of taxi facilities have lighting
  - 19% of taxi facilities are paved
  - 2% of taxi facilities have public telephones
  - 11% of taxi facilities have offices
  - 17% of taxi facilities have shelters
  - 15% of taxi facilities has ablution facilities.

b) Capacity utilisation of ranks

- i) The capacity utilisation of many of the informal ranks could not be measured, as there was either no capacity or no provision of facilities such as shelters, paving and amenities.
- ii) Disorderly operations at informal or poorly planned ranks sometimes give rise to conflict among operators.

c) Routes

- i) Of the 190 (approximately 50% outward-bound and 50% inward-bound) taxi routes in the SDM, 15% are in the Elias Motsoaledi LM, 3% in the Fetakgomo LM, 17% in the Greater Marble Hall LM, 43% in the Greater Tubatse LM and 22% in the Makhuduthamaga LM.
- ii) Of the 28 subsidised bus routes in the SDM, 57% are in Elias Motsoaledi LM, 53% in Greater Marble Hall.
- iii) There is no commuter rail service in the GSDM area.

d) Route utilisation survey for taxis

- i) The routes are not all equally busy
- ii) Only 15% of the taxis achieve more than 2 trips during the AM peak period
- iii) Only 9% of the taxis achieve more than 2 trips during the PM peak period
- iv) There is a need for more subsidised bus services in the GSDM area.

- e) Waiting times for taxis
  - i) The results of the waiting-time surveys make better sense if they are examined for the individual routes
  - ii) The information should be considered from the point of view of seeing whether passengers are waiting for taxis or whether the vehicles are waiting for more passengers before they can depart
  - iii) The summarised information on the waiting times and the number of passengers and vehicles left in the queues when the sample vehicle left, gives a clear message, namely that there is a general over-supply of taxi services.
  
- f) Operational vehicles
  - i) The route utilisation survey noted 1 462 taxi vehicles that provided passenger services in the GSDM area during the survey periods (06:00 to 9:00 and 15:00 to 18:00)
  - ii) There were 1 372 taxis noted in the Elias Motsoaledi LM, 287 in the Fetakgomo LM, 530 in the Greater Marble Hall LM, 1 463 in the Greater Tubatse LM and 1 083 in the Makhuduthamaga LM.
  - iii) There were 18 buses in operation on the subsidised routes in the GSDM area.
  
- g) There are a limited number of metered taxis in operation in the SDM, except for Greater Tubatse LM. In Jane Furse there are a large number of 4+1 vehicles.
- h) There are metered-taxi activities in the Tubatse LM and in operation in the GSDM area as well as 4 + 1 activities in Jane Furse.
- i) Light delivery vehicles (LDVs) are utilised for learner trips as well as areas where the quality of the road is not good
- j) Pedestrians are highly active at areas related to the following:
  - i) Road sections that serves as a link between the residential areas as well as economic active centres. A good examples of the last mentioned are Road R37 that links with the CBD of Burgersfort
  - ii) Link between CBD and public transport facilities in the CBD of the respective local municipalities. A good example of the last mentioned is the link between the CBD of Marble Hall and the taxi rank as well as the link between the shopping centres and the taxi ranks in Jane Furse
  - iii) Areas surrounding schools, hospitals and clinics
  
- k) Comparison of information of the Board and Registrar of Taxis with CPTR information
  - i) Despite numerous efforts to obtain detailed information from the RAS and LPTS systems, the study team did not receive any information apart from the route verification information about the A and B points of routes.
  - ii) The intended comparison can be done whenever the RAS and LPTS information becomes available.

- l) Information for the development of the Operating Licence Strategy (OLS):
  - i) The method used for compiling the CPTR was sufficient to have captured the data in the towns and the rural areas, although the facilities and operations in the remote rural areas were very limited and, even though the method was good, many of the items to be surveyed were simply not available.
  - ii) The information collected as part of this first CPTR is adequate to estimate the extent of the public transport operations on the different routes.
  - iii) The information could be used and is adequate for compiling the OLS for the Greater Sekhukhune District Municipality.

## 5.2 **RECOMMENDATIONS**

It is recommended that:

- a) The CPTR information as available on the SDM-CPTR database should be used for developing an Operating Licence Strategy (OLS) as guideline for the Operating Licence Board with regard to the issuing of new operating licences.
- b) The CPTR information should furthermore be used for developing a Public Transport Plan for the GSDM District Municipality, which would guide the implementation of public transport projects and strategies, and could serve as input into the Integrated Transport Plan (ITP).
- c) The taxi-related CPTR information should be made available to the taxi industry in order to assist them to plan their daily operations and to become more effective in their operations.
- d) The SDM-CPTR should be updated every two years.

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## Chapter

### 6. BIBLIOGRAPHY

- 1) NATIONAL LAND TRANSPORT ACT, 2000 (ACT NO.22 OF 2000), DEPARTMENT OF TRANSPORT
- 2) CURRENT PUBLIC TRANSPORT RECORDS, PLANNING REQUIREMENTS IN TERMS OF THE NATIONAL LAND TRANSPORT TRANSITION ACT, 2000, *GOVERNMENT GAZETTE*, PRETORIA 24 JULY 2002
- 3) PROVINCIAL LAND TRANSPORT FRAMEWORK FOR THE NORTHERN PROVINCE, FINAL DRAFT, NOVEMBER 2006, KHUTHELA PROJECTS (PTY) LTD
- 4) CONCEPTUAL FRAMEWORK AND BUSINESS PLAN: DEVELOPMENT OF PUBLIC TRANSPORT TRANSFER FACILITIES AT MINES ON THE DILOKONG CORRIDOR, DEPARTMENT OF TRANSPORT AND TRADE AND INVESTMENT LIMPOPO, INTERIM REPORT, FIRST DRAFT OCTOBER 2002.
- 5) FEASIBILITY STUDY ON RAIL DEVELOPMENT IN THE LIMPOPO PROVINCE, FINAL DRAFT REPORT, AUGUST 2006
- 6) 2003 PUBLIC TRANSPORT PLAN FOR THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY, AUGUST 2004, ARCUS GIBB (PTY) LTD
- 7) 2003 RATIONALIZATION PLAN FOR THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY, MAY 2004, ARCUS GIBB (PTY) LTD
- 8) 2003 INTEGRATED TRANSPORT PLAN FOR THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY, OCTOBER 2004, ARCUS GIBB (PTY) LTD
- 9) 2003 CURRENT PUBLIC TRANSPORT RECORDS FOR THE GREATER SEKHUKHUNE DISTRICT, FINAL DRAFT MARCH 2003, LIDWALA CONSULTING
- 10) 2003 OPERATING LICENCE STRATEGY FOR THE GREATER SEKHUKHUNE DISTRICT MUNICIPALITY, MAY 2004, ARCUS GIBB (PTY) LTD