## **CAPRICORN**



## **DISTRICT MUNICIPALITY**

## **CURRENT PUBLIC TRANSPORT RECORD** (CPTR)

February 2007

**Prepared** for: CAPRICORN DISTRICT MUNICIPALITY GLOWING SUNSET JOINT VENTURE

Prepared by:

#### **EXECUTIVE SUMMARY**

#### **Terms of reference**

Each district municipality that is a planning authority is responsible in terms of the National Land Transport Transitional Act (Act 22 of 2000) for preparing a Current Public Transport Record (CPTR) for its entire area.

#### 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, public transport plan and integrated transport plans.

#### Study area

The scope of the work covers the whole area of Capricorn District Municipality, which covers the five Local Municipality areas of Polokwane Municipality; Blouberg Municipality; Aganang Municipality; Lepelle-Nkumpi Municipality; and Molemole Municipality.

#### Approach followed and report

The report contains two main sections, namely the process followed and the actual record of public transport.

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

The following role players were consulted:

- Limpopo Province Department of Transport Public Transport Division.
- Limpopo Province Department of Transport Registrar of Taxis.
- Limpopo Province Department of Transport Operating Licencing Board.
- Capricorn District Municipality Economic Development and Planning Division.
- Taxi Industry,
- Local municipalities
- Bus industry
- Capricorn District Transport Forum
- Local transport forums
- Spoornet.

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 execute the surveys commenced. The planning process was communicated and discussed with the Capricorn District Municipality and with the role players in the relevant public transport industry.

The surveys were executed in accordance with the Capricorn District Municipality's Terms of Reference for the preparation of a Current Public Transport Record (August 2006).

The following surveys were conducted:

- Facilities
- Routes determination
- Rank utilisation
- Route utilisation
- Waiting times

The database was developed to assist with the interpretation of data. The report contains a summary of the information determined from the CDM-CPTR Database. The purpose of the database is therefore to assist in complementing the report, reduce the thickness of the report and to provide a tool that can easily be updated from time to time.

#### Actual Record of Public Transport System in the Capricorn District Municipality

The report provides a summary of information collected as part of the CDM-CPTR. It will provide all stakeholders a view of what is involved in public transport in the Capricorn District Municipality with regard to facilities, capacity utilisation of ranks and routes, waiting times of passengers and vehicles, the operational vehicles and the number of trips made per operational vehicle.

The facility surveys were conducted at taxi ranks, bus termini and train stations.

The facility surveys conducted indicate that the Capricorn District Municipality has a total of 107 taxi facilities of which more than eighty percent are informal.

Bus facilities in the Capricorn District Municipality are limited to the main bus terminus in Polokwane and then the many loading and off-loading bus stops through the whole district.

The current operating rail line for the transportation of passengers runs between Johannesburg and Makhado, with the Polokwane Station as the main station in the Capricorn DM.

The findings of the route surveys conducted were that there were 285 taxi routes in the Capricorn District, and nearly 50% of the routes were in the Polokwane Local Municipality.

Of the 180 subsidised bus routes in the CDM, 60% are in Polokwane LM.

The only message from the route utilisation analysis is that there is a vast over- supply of taxis on most routes in the CDM.

No route utilisation survey was done for the bus services.

The results of waiting-time surveys only make sense if they are examined for the individual routes. The waiting times 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.

The route utilisation survey noted 2 018 taxi vehicles that provided services in the CDM area during the survey periods (06:00 to 9:00 and 15:00 to 18:00)

There were 196 buses in operation on the subsidised routes in the CDM area

There are very few metered taxis in operation in the CDM area, but it is necessary to formalise this mode of transport.

No detailed surveys were done on light delivery vehicles (LDVs) that transport passengers, because of the informal and unpredictable nature of such operations. However, it was noted through the relevant taxi structures that problems are currently being experienced at the following localities:

- Doornspruit in the Polokwane municipal area
- Moletji in the Polokwane municipal area
- Bochum in the Blouberg municipal area

Donkey-cart activities are prevalent in all the rural settlement areas, but there were more donkey-cart activities observed in the following areas:

- Moletji in the Polokwane municipal area
- Mafefe in the Leppelle-Nkumpi municipal area

Comparison of information of the Board and Registrar of Taxis with CPTR information could not be done despite numerous efforts to obtain the detailed information from the RAS and LPTS systems. The intended comparison can be done whenever the RAS and LPTS information becomes available.

#### **RECOMMENDATIONS:**

It is recommended that:

- As the results of the CPTR surveys indicate a general over-supply of taxis, no permits should be considered before the OLS has been compiled and approved.
- The CPTR information as available on the database should be used to develop an Operating Licence Strategy (OLS) as guidance to the Operating Licensing Board with regard to the issuing of new permits.
- The CPTR information should furthermore be used for developing a Public Transport Plan which would guide the implementation of Public Transport projects and strategies, and could serve as input into the Integrated Transport Plan (ITP).

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#### Chapter

#### 1. INTRODUCTION AND BACKGROUND

1

With the promulgation of the National Land Transport Transition Act (NLTTA), act 22 of 2000, it has become a requirement of every district municipality to prepare a Current Public Transport Record (CPTR). According to the TPR4 guidelines, the CPTR may exist in two forms, a basic form, i.e. where only essential information is captured or an expanded version were data that would be relevant for future public transport plans are also captured, processed and presented in the report. The data collection approach adopted was that of a planned, qualitative approach. The method of presentation of data was that of an electronic GIS format and manual.

The function of this document is to serve as a record of public transport services and usage for the Capricorn District. The report has been prepared in accordance with guidelines of Government Gazette vol. 445, July 2002, No.23659. However, an expanded approach was adopted to assist with the formulation of the Public Transport Plan (PTP).

The National Land Transport Transition Act (NLTTA), Act 22 of 2000, promulgated in August 2000 requires metropolitan and service councils to prepare a record of public transport operations in their area of jurisdiction. GLOWING SUNSET Consulting has been appointed by the district municipality to prepare the Current Public Transport (CPTR). The CPTR report is the documentation of the study methodologies adopted to capture the data, background to the study area and finally a record of the data itself.

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 Transition Act (Act 22 of 2000) for preparing a Current Public Transport

Record (CPTR) for its entire area. In 2006 the Capricorn District Municipality appointed Glowing Sunset to review the Capricorn District Municipality's Current Public Transport Records (CDM-CPTR) for the 2006/2007 financial year.

#### 1.2 PURPOSE OF THE STUDY

The aim of preparing a CPTR is to quantify the trilogy of movements. This would serve as a primary source of information for the preparation of an Operating Licenses Strategy (OLS), and provide detailed input for future public transportation planning. In addition, the CPTR would also provide information that could be used for performance monitoring of the public transport system.

Based on the *Government Gazette* published on 24 July 2002, "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.
- In terms of section 18(1) of the Act, transport plans must form the transport component of the integrated development plans.
- All activities in collecting information for the CPTR must be guided by the question 'for what purpose do we need the information'
- 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 Capricorn District Municipality. The five Local Municipality areas covered include the –

- a) Polokwane Municipality;
- b) Blouberg Municipality;
- c) Aganang Municipality;
- d) Lepelle-Nkumpi Municipality; and

#### e) Molemole Municipality.

None of the above-mentioned local municipalities has prepared or will prepare a CPTR for their respective municipal areas. Figure 1.3.1 indicates the location of the respective municipalities in the Capricorn 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 process followed in developing the CPTR. Chapter 4 provides more information about the actual record of the public transport records. The report concludes with a bibliography in Chapter 5, followed by the appendices.



#### Chapter

#### 2. STUDY APPROACH

Department of Roads and Transport in Limpopo Province has embarked on a process to provide a provincial framework for the implementation of the package of plans in a practical and consistent manner. Consultants have been appointed to assist with;

• "an analysis and review of planning requirements for current transport plans, an operating license strategy, public transport plans and rationalisation plans in terms of the National Land Transport Transition Act, 2000 and assessment of these requirements in terms of other existing or concurrent national and provincial legislation;"

• "a determination of the practical provincial and municipal implementation of planning requirements, including but not limited to the utilisation of planning in the delivery of the Local Road Transportation Board /Public Transport Board ; and ".

• "an investigation into the most cost-effective data collection and modelling methodologies to assist the Department with the practical implementation of planning requirements and development of an operating licensing strategy".

The report contains two main sections, namely:

- a) Process followed.
- b) Actual record of public transport.

The above-mentioned are discussed in more detail in the subsequent subsections.

#### 2.1 PROCESS FOLLOWED

The process followed contains the following elements:

- Consultation and liaison
- Site visits
- Surveys
- Database development
- Capturing, dissemination and storage of data
- Preparation of report

With this objective as background, the following principles have been adopted to guide the CPTR process;

• "Actions taken in the short term should not conflict with/compromise long term plans.

• Transport is about moving people between Origin and Destinations (O-D).

• The actual pattern of movement (ito of person trips between each O-D pair) will be a direct function of the pattern of land use development and the transport systems/services provided.

• Before a long term movement pattern can be established, it is necessary to start with knowledge of the current movement pattern.

• This shows what people ARE doing at the moment and it provides the basis for identifying inefficiencies (primarily high costs) in the current pattern of land use development and transport services.

• Having identified these inefficiencies the land use and any other changes needed to increase efficiencies can be evolved."

The CPTR therefore must ensure that the information relevant to the above is collected to ensure that the subsequent Public Transport Plan (and Operating Licence Strategy) assists in the migration of movement patterns from the existing service distribution to the long-term desired OD patterns.

In order to achieve this, a two-stage CPTR has been proposed;

• **Stage 1: Scoping** - To gain an idea of the nature and size of the PT trip situation: the generators and attractors, significant interchanges etc. Also locating suitable data sources and finding out who to speak to.

• Stage 2: Collection of CPTR and Planning Data - In essence this stage would be dealing with dynamics of towns and settlements above a certain size only. The CDM has appointed Glowing Sunset Consulting to carry out the review, which underpins and cover the entire district.

#### 2.2 ACTUAL RECORD OF PUBLIC TRANSPORT

The actual record of public transport consists of the following:

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- ➤ Facilities
- Routes
- Operational vehicles
- Routes served per operational vehicle
- Capacity utilisation of ranks
- Route utilisation
- Waiting times
- Comparison of information of the Operating Licence Board with the information of the Registrar of Taxis.
- Comparison of information of the Operating Licence Board with the CPTR information.
- Comparison of information of the Board and the Registrar of Taxis with the CPTR information.

Figure B-1 of Appendix B of this report provides a detailed base map prepared to indicate all the public transport facilities in the Capricorn District Municipal Area. In addition a basic 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 CDM-CPTR on a continuous basis.

#### Chapter

#### 3. PROCESS FOLLOWED

Chapter 3 contains the following information:

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

This information is elaborated on in the subsections below.

There are two important components of generating a CPTR and these are as follows:

- The collection of data to be recorded
- The dissemination of the recorded data.

Before describing the data capture methodology it is essential that a precise understanding of the information needed be attained. Since the nature of the information required ultimately dictates the methodology to be used.

The information that is needed to be conveyed in the CPTR is as follows:

- · Person trips spread across the different public transport modes
- Capacity provided by the modes on the routes or corridors they follow
- Capacity utilisation on those routes
- A check of percentage illegal operations on a particular route
- Passenger waiting times
- Passenger origin destination information
- Trip purpose
- Trip Frequency

Some of this data are more compatible with each other in terms of efficiency in acquisition. For example some data such as origin destination information may take longer to acquire as it requires some verbal communication with users whereas information related to capacity provision and utilisation needs to be acquired by visual inspection and counting. This counting has to be at a consistent pace and the enumerators cannot be distracted by conversation, etc or vital information may be lost or go un-captured.

Clearly all the data required could not be acquired at once. It was therefore decided to group data requirements together that have similar acquisition requirements and develop unique data gathering strategies for each of these groups.

#### 3.1 CONSULTATION AND LIAISON

Consultation and liaison are an integral part of the compilation of the CDM-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) Capricorn District Municipality Economic Development and Planning Division.
- e) Local municipalities
- f) Bus industry
- g) Capricorn District Transport Forum
- h) Local transport forums
- i) Spoornet
- j) Airport Authority
- k) Taxi Industry

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

The Limpopo Province Department of Transport plays an important role in the compilation process of the CDM-CPTR for the following reasons:

- a) The Department is responsible for ensuring that well-planned and 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.

Glowing Sunset Joint Venture consulted on a continuous basis with the Senior Manager of Public Transport in the Limpopo Province, as well as with other members of the Public Transport Division with regard to the process.

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

Since the Registrar of Taxis plays an extremely important role in the Limpopo Province it was necessary to consult Mr D Makgahlela on a regular basis. One of the aims was to use the information obtained from the existing RAS information system that could be verified in the field and updated through the process. Unfortunately the information from the RAS system was not available from the Registrar of Taxis, as the RAS system for the Limpopo Province was not effectively available. The ideal situation would have been to use all the existing information as a point of departure for capturing and updating data.

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

Mrs Sathege, head of the Operating Licence Board Division, and other members of the division were consulted and informed continuously about the process. In addition, LPTS information was obtained from the Operating Licence Board.

#### 3.1.4 Capricorn District Municipality – Economic Development and Planning Division

The client of the project, the Capricorn District Municipality, was consulted on a continuous basis, in order to report progress as well as any problems identified. In addition Mr SS Sebone was consulted regularly in order to build his capacity as well as to clarify issues between the Capricorn District Municipality and other role players.

#### 3.1.5 Capricorn District Taxi Council

The Capricorn District Taxi Council plays a major role in the compilation of the CDM-CPTR, since taxis form a high percentage of public transport in the Limpopo Province. All liaison with the taxi industry was conducted through the Capricorn District Taxi Council.

The consultation process with the Capricorn District Taxi Council delayed the project by approximately two weeks, however, as members were not readily available for meetings. A copy of the minutes of the meeting appears in Appendix A of this report.

In order to build the capacity of the Capricorn District Taxi Council, the members of the Executive were continuously consulted and kept informed. The value of their knowledge of the taxi industry in the area should never be under-estimated.

#### **3.1.6** Local municipalities

The Capricorn District Municipality informed the respective local municipalities in Capricorn District about the CPTR. As part of the agenda of the Capricorn District Transport Forum, the respective local municipalities were informed.

#### 3.1.7 Bus industry

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

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

#### 3.1.7.1 Subsidised operators

The most prominent role player in the bus industry in the Capricorn District is Great North Transport. Glowing Sunset Joint Venture liased with staff members of the Great North Transport regarding the project and CPTR process. All subsidised operators in the Capricorn District are located in Polokwane municipality, and they are as follows:

- a) Bahwaduba Bus Services
- b) Great North Transport-Polokwane

#### 3.1.7.2 Non-subsidised operators

There are thirteen (13) non-subsidised bus operators in the Capricorn 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 Capricorn District is shown in Table 3.1.7.2.1 below.

TABLE 3.1.7.2.1:	DISTRIBUTION OF N	ON-SUBSIDISED BUS
<b>OPERATORS IN</b>	THE CAPRICORN D	ISTRICT MUNICIPAL
AREA		
Municipality of	Location of	Number of
Operation	Operation	Operators
Polokwane	Pietersburg	5
Municipality		
Polokwane	Seshego	2
Municipality		
Blouberg	Bochum	3
Municipality		
Molemole	Munnik	1
Municipality		
Molemole	Koloti	1
Municipality		
Aganang	Juno	1
Municipality		

#### 3.1.8 Capricorn District Transport Forum

The Capricorn District Transport Forum is the core of all the transport planning processes in the Capricorn 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. Detailed discussions were held with the Capricorn District Transport Forum. A follow-up meeting will be held as soon as the CPTR has been completed.

#### 3.1.9 Local Transport Forums

The role of local transport forums should be vital for ensuring sustainable and reliable public transport for any local municipality. Unfortunately the Capricorn District only has one active local transport forum, namely the Polokwane Local Transport Forum. The members of this forum were consulted and informed on a monthly basis about this project.

#### 3.1.10 Spoornet

Spoornet owns all the railway system in the Capricorn District. The study team liased with and obtained some information from Spoornet regarding railway facilities (train stations), the operating times of the trains, train routes, number of trains, train capacity and service capacity in the Capricorn District. It should be noted that Spoornet transports a very low percentage of

passengers in the Capricorn District. None of the daily commuters in the Capricorn District Municipal Area uses rail transport.

#### 3.2 SITE VISITS

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.

Site visits to all the public transport facilities for the different modes were conducted after the 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 rank.
- 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 3.3 contains more details of the surveys of facilities.

#### 3.3 SURVEYS

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

The surveys were executed in accordance with the Capricorn District Municipality's Terms of Reference for the preparation of a Current Public Transport Record. A strictly controlled data collection process was followed. Spot checks were done to ensure that surveys were being executed correctly. The Glowing Sunset JV added some value to the CDM-CPTR project, as additional information was collected which was not specified in the Terms of Reference. Examples of this additional information are as follows:

a) More information was gained about the facilities.

b) Information about all taxi routes was captured by using the GPS and GIS-related programs.

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- c) Detailed information about bus transport was also obtained and included.
- d) Detailed calculations could be done using the captured information.

The following surveys were conducted:

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

The above-mentioned surveys are described in detail below. Appendix A-2 contains definitions of taxi ranks, pick-up points, holding areas, routes and corridors.

#### 3.3.1 Facility surveys

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

- a) The physical location of facilities
- b) Attributes of the facilities
- c) Information to role players in the Capricorn District so that they can make informed decisions about the upgrading of rank facilities.

The following include some of the specific information that was collected:

- a) Location of facilities for example co-ordinate information such as the latitude and longitude position of the facilities as well as the physical addresses including a photo 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 conditions of facilities were 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 future purposes.

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

#### **3.3.2** Route determination

Route determination is vital for an understanding of the operational methods used in the public transport industry. This is a process for collecting the route information, and gives a detailed description of the routes or networks on which public transport services operate. The route information is usually obtained by specifying the origin and destination of the route as well as any intermediate points that might be relevant, such as street names, road numbers, suburbs, towns, villages, and points where passengers are picked up and dropped off.

After discussions with the relevant role players it was decided that the routes that had been verified by the Limpopo Province Registrar of Taxis should be used as the base information for the route determination process. However, as the verified routes were not readily available in a typed format, the process of determining the routes was hampered from time to time. The information was received as it became available and some of the information was not available in electronic format.

Appendix D of this report contains a summary of the Public Transport Routes survey in the Capricorn District, which includes buses and taxis. Section 4.2 of this report as well as the CPTR database contains more detail information about the routes.

#### **3.3.3** Rank utilisation

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 respectively for the morning (AM Peak), midday peak and afternoon (PM Peak). More detailed information about rank utilisation is given in section 4.5 off this report and is also available in the CDM-CPTR database. Table C-1 of Appendix C of this report contains a summary of the rank utilisation surveys for the Capricorn District.

#### 3.3.4 Route utilisation

The purpose of route utilisation surveys is to determine how frequently a particular taxi uses a particular route. This information will become extremely important when the route Operating Licensing Strategy (OLS) has to be determined. It would 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 that 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 during the peak during which the specific point was fully operational. Most of the ranks linked to the Central Business District (CBD) of local municipalities are operational during the Afternoon Peak whereas the ranks located close to residential areas are active during the Morning Peak. Due to the operational methods of taxis during the AM peak, when passengers are picked up along the route or, as it is generally called, 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 4.6 and is also available in the CPTR Database. Table E-1 of Appendix E of this report contains a summary of the route utilisation surveys.

#### 3.3.5 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 morning peak made it impossible to survey the waiting times for all operations during the morning peak. More detailed information is given in section 4.7 of this report and is also available in the CPTR Database. Appendix F of this report contains a summary of the waiting time survey.

#### 3.4 DATABASE DEVELOPMENT

The database was developed to assist with the interpretation of data. The aim is to save paper by not providing the raw information, but instead submitting the information by means of the database. The report contains a summary of the information determined from the CPTR Database. The purpose of the database is therefore to assist in the following manner:

- a) Complement the report
- b) Reduce the number of pages of the report
- c) Provide a tool that can easily be updated from time to time
- d) Provide a tool that can easily compare the CPTR information with the RAS and LTPS information

Glowing Sunset Joint Venture would provide training for the official/s who would make use of the database. The database was developed in Access 2000 and has two main headings:

- a) Captured Data
- b) Output

The subsequent subsections discuss these two headings in more detail.

#### 3.4.1 Captured data

The captured data section of the database refers to the actual information that was obtained via field surveys, interviews and existing reports. The following main sections were developed as part of the Captured Data section:

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

The subsequent subsections discuss the above-mentioned main sections in more detail.

#### 3.4.1.1 CDM-CPTR information

The two major modes that form part of the Capricorn District Municipality CPTR are the -

- a) Taxi mode and
- b) Bus mode.

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

- ➢ Facilities
- Capacity utilisation of ranks
- Routes
- Route utilisation
- ➢ Waiting times

In terms of the bus industry which is much better organised, information was obtained about the following:

- ➢ Facilities
- Operators
- ➤ Fleets
- Routes and timetables

#### 3.4.1.2 Limpopo Registrar of Taxis Administration System (RAS)

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

- > Rank information
- ► Taxi operators' information
- Verified routes information
- Vehicle registration information

#### 3.4.1.3 Limpopo Province Operating Licence Information (LPTS)

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

- From place (origin, A point))
- To place (destination, B point)
- Certificate number
- ➢ Issue date
- ➢ ID number of operator
- Trade name
- ➤ Initials
- Vehicle registration number

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

- a) Facilities
  - Rank mentioned at facility information but not in rank utilisation information
  - Rank mentioned at facility information but not in route information as origin rank
  - Rank mentioned at facility information but not at route information as destination rank.
- b) Rank capacity utilisation
  - Rank mentioned at utilisation information but no rank mentioned in facility information.
- c) Routes
  - Rank mentioned as origin in route information but no rank mentioned in facility information.
  - Rank mentioned as destination in route information but no rank mentioned in facility information.
  - Route mentioned in route information but not in route utilisation information.
  - Subroute mentioned in route information but not in waiting-time information.
- d) Route utilisation
  - Route mentioned in route utilisation information but no route mentioned in route information.
  - Subroute mentioned in route utilisation information but no subroute mentioned in route information.
- e) Waiting times
  - Route mentioned in waiting-time information but route not mentioned in route information.
  - Subroute mentioned in waiting-time information but not in route information.

#### 3.4.2 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.

#### 3.4.2.1 Taxi output

The following taxi output is relevant:

- a) Facilities
  - All taxi facility information
  - > All taxi facility information for a specific district municipality
  - > All taxi facility information for a specific local municipality
  - > All taxi facility information for a specific facility code number
- b) Capacity utilisation of ranks
  - All taxi rank utilisation information
  - > All taxi rank utilisation information for Capricorn District Municipality
  - > All taxi rank utilisation information for a specific local municipality
  - > All taxi rank utilisation information for a specific facility code number
- c) Routes
  - All taxi route information
  - All taxi route information for a Capricorn District Municipality
  - > All taxi route information for a specific local municipality

- > All taxi route information for a specific facility code number
- > All taxi route information for a specific main route code
- d) Route utilisation
  - > Taxi route utilisation results for all main routes
  - > Taxi route utilisation results for all subroutes
- e) Waiting times
  - All taxi waiting-time information
  - All taxi waiting-time information for a specific district municipality
  - > All taxi waiting-time information for a specific local municipality
  - > All taxi waiting-time information for a specific facility ID code
- f) Taxi-related information
  - Taxi associations
  - > Number of minibus-taxi vehicles per district municipality.
  - > Number of minibus-taxi vehicles per local municipality.
- g) Taxi comparisons
  - > Operating licence information versus Registrar of Taxis information
  - > Operating licence information versus CPTR information
  - > Registrar of Taxis information versus CPTR information

#### 3.4.2.2 Bus output

The following bus output is relevant:

- a) Bus facilities
  - > All bus facility information
  - > All bus facility information for a specific district municipality
  - > All bus facility information for a specific local municipality
  - > All bus facility information for a specific facility code number
- b) Bus operators
  - All bus operator information

- > All bus operator information for a specific district municipality
- > All bus operator information for a specific local municipality
- c) Bus fleet
  - All bus fleet information
  - > All bus fleet information for a specific district municipality
  - > All bus fleet information for a specific local municipality
- d) Bus route and timetable information
  - > All bus route and timetable information
  - > All bus route and timetable information for a specific district municipality
  - > All bus route and timetable information for a specific local municipality
  - > All bus route and timetable information for a specific facility code number

#### 3.5 CAPTURING, DISSEMINATION AND STORAGE OF DATA

Data capturing for the CDM-CPTR Database is a continuous process. As already stated, the database has been prepared in Access 2000. The information captured that does not yet appear on the existing base-map will be transferred to the base-map.

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 CDM\_CPTR Database.

#### 3.6 PREPARATION OF REPORT

It is important to record the processes, results and the way forward in a report and also to communicate the findings of the project to the stakeholders to ensure that all take note of the findings and know about the information. The communication process is necessary to build confidence in the information amongst the stakeholders.

#### Chapter

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

The purpose of Chapter 4 is to provide a summary of information collected as part of the CDM-CPTR. The summarised information would allow all stakeholders to obtain a view of what is involved in public transport in the Capricorn District Municipality. The survey location followed by the public transport route and destination was recorded. The vehicles using that route and their registration numbers, vehicle type, vehicle capacity, departing passenger load and departure times. The vehicle capacity would assist in providing the aggregated and disaggregated public transport capacity. In conjunction with the departing passenger load, service capacity utilisation was also estimated.

Vehicle type assisted with the person trip are spread across the different public transport modes. The registration numbers recorded would assist in the future identification of illegal public transport operations.

Chapter 4 contains specific information about the following:

- a) Facilities
- b) Capacity utilisation of ranks
- c) Routes
- d) Route utilisation
- e) Waiting times
- f) Operational vehicles
- g) Trips per route per operational vehicle
- h) Comparison of information of the Operating Licence Board with information of the Registrar of Taxis
- i) Comparison of information of the Operating Licence Board with the CPTR information
- j) Comparison of information of 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
- c) Train stations

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

#### 4.1.1 Taxi ranks

The facility surveys conducted indicate that the Capricorn District Municipality has a total of 107 taxi facilities. Table 4.1.1.1 shows the number of taxi ranks situated in the different local municipality areas, the percentage of formal ranks and the percentage of taxi facilities per municipal area in relation to the total number of ranks in the Capricorn District Municipality.

TABLE 4.1.1.1: TAXI FACILITY STATISTICS			
Local	Number of	% Formal	% in relation
Municipality	ranks		to CDM
Polokwane	44	11,4	41,1
Aganang	15	20,0	14,0
Blouberg	12	16,7	11,2
Molemole	11	27,3	10,3
Lepelle-	25	8,0	23,4
Nkumpi			
Total for CDM	107		100

In terms of taxi ranks in the Capricorn District Municipal Area, the following information is also relevant:

- a) 7,5 % of taxi facilities are on-street ranks
- b) 86 % of taxi ranks are informal facilities
- c) 8,4 % of taxi facilities have lighting
- d) 20,2 % of taxi facilities are paved
- e) 15,9 % of taxi facilities have public telephones
- f) 11,2 % of taxi facilities have offices
- g) 15,9 % of taxi facilities have shelters
- h) 16,8 % of taxi facilities have ablution blocks

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

#### 4.1.2 Bus termini

Bus facilities in the Capricorn District Municipality are limited to the main bus terminus in Polokwane and then the many loading and off-loading bus stops through the whole district. The quality of the bus terminus in Polokwane is very poor and a large part of the roof coverage has been vandalised or removed.

#### 4.1.3 Train stations

The current operating line for the transportation of passengers runs between Johannesburg and Makhado. The existing line, which runs as a double line between Pretoria North and Pienaars River, falls partly under the commuting area of the Gauteng Province.

Train facilities in the Capricorn District are restricted to the main station in Polokwane. The station has proper facilities but serves only mainline passengers and there are no commuters. Figure 4.1.3.1 is a diagram of the rail network and stations / halts in the Limpopo Province. The source of this map is the "Provincial Land Transport Framework for the Northern Province, November 2000".

#### 4.1.4 Metered taxis

The metered taxis operate in a very informal fashion from four main points in the CDM. These points are: Pietersburg International Airport, Savanah Shopping Mall, Meropa Casino and the Ultra City on the N1. There are only four metered taxis registered with the Provincial Operating Licensing Board and few of the vehicles carry meters as required by the Act.

FIGURE 4.1.3.1: SCHEMATIC ILLUSTRATION OF RAIL NETWORK AND STATIONS / HALTS



#### 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 standalone holding facilities.
- b) **Facility capacity**, which implies the number of loading bays available.
- c) <u>Utilisation</u>, which implies the average number of bays occupied in the facility.

It is extremely important to realise that a high number of facilities in the Capricorn District Municipality are informal facilities. In practice, this implies that it is virtually impossible to determine the rank utilisation. In order to indicate the urgency of the informal facilities' capacity, this 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 08:00
- b) MID Peak between 11:00 and 13:00
- c) PM Peak between 16:00 and 18:00

The higher the value of the capacity utilisation above 100%, the greater the overload on the facilities. A rank such as the Polokwane Oriental Plaza has up to 144 taxis at 14:00 but no facilities have been provided. The rank is not properly planned as it happens to be situated on the parking area of the plaza. In Table C-1 the Polokwane Oriental Plaza Taxi Rank (Number L-F0034C) has a utilisation value of 13 118,75%, which is a clear indication of the stressful conditions that everyone at the plaza and rank probably experiences because of the informal character of a rank where so many vehicles and people gather. Other ranks in a similar but less serious state are the -

- a) Checkers Rank in Polokwane (with a value of 4 668,75),
- b) Lebowakgomo Zone A and 7 ranks (with values of respectively 3 818,75 and 3 743,75),
- c) Groothoek (Mathibela) rank (with a value of 1 768,75) and
- d) Polokwane (Westernburg) rank with a value of 1 387,5.

More detailed information per 15-minute interval is available in the CDM-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. It is important to note that information about only 21 routes of the possible 35 routes verified by the taxi associations was available in electronic format.

Route surveys were conducted for the following types of modes:

- a) Taxi
- b) Bus
- c) Train

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

#### 4.3.1 Taxi routes

Based on the surveys conducted for the CDM-CPTR it is crucial to realise 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 service provider. Typical socio-economic factors that influence the operational methods of the taxi industry are as follows:

- a) The widespread distribution of villages
- b) The level of income in villages
- c) The employment level 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. It is, however, 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 the route. An example of the latter possibility is the Seshego Taxi Association. The A point is Seshego and the B point is Polokwane. The operators are, however, allowed to operate on a number of roads between Seshego and Polokwane. The Seshego Taxi Association also works on a rotation basis for the following reasons:

- a) A lack of facilities
- b) To minimise passenger queues at the rank
- c) To allow all taxi operators in Seshego an equal opportunity to operate routes
- d) To provide services on the economically viable as well as the unprofitable routes

The findings of the route surveys conducted were that there were 285 taxi routes in the Capricorn District whereas the forward and reverse routes were separately described, and nearly 50% of the routes were in the Polokwane Local Municipality. Table 4.3.1.1 provides a more detailed breakdown of the routes per local municipality.

TABLE 4.3.1.1: DISTR	RIBUTION OF TAXI	ROUTES PER LOCAL	
MUNICIPALITY IN THE CAPRICORN DISTRICT			
Local Municipality	Number of routes	% in relation to CDM	
Polokwane	149	49,8	
Aganang	22	8,1	
Blouberg	29	10,7	
Molemole	21	7,8	
Lepelle-Nkumpi	64	23,6	
Total CDM	285	100	

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Table D-1.1 of Appendix D-1 of this report contains a summary of taxi routes in the Capricorn District, indicating the following:

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

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

#### 4.3.2 **Bus routes**

As the bus industry is formalised, route information was easily available. The information about routes for subsidised services was highly accurate. By contrast, no information could be obtained about the unsubsidised bus services as they do not operate on specific routes.

Based on the bus route information obtained, there are 180 subsidised bus routes in the Capricorn District. Table 4.3.2.1 provides a more detailed breakdown of the bus routes per local municipality in the Capricorn District.

TABLE 4.3.2.1: DISTRIBUTION OF SUBSIDISED BUS ROUTES PER			
LOCAL MUNICIPALITY IN THE CAPRICORN DISTRICT			
Local Municipality	Number of routes	% in relation with	
		CDM	
Polokwane	108	60	
Aganang	49	27,2	
Blouberg	3	1,7	
Molemole	1	0,6	
Lepelle-Nkumpi	19	10,6	
Total for CDM	180	100	

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Table D-2.1 of Appendix D of this report contains a list of bus routes in the Capricorn District, 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 CDM-CPTR Database with specific reference to the timetables and fare structures.

#### 4.3.3 Train routes

The Bosvelder is the only scheduled mainline service operating on a daily frequency to and from the Limpopo Province as follows:

- Johannesburg Louis Trichardt Messina; and
- Messina Louis Trichardt Johannesburg.

A service (called the Special Train) provides a non-scheduled service over weekends.

The departure and arrival times of trains are only estimates, but trains do not depart before the times of departure indicated.

Table D-3.1 shows the timetable for the Bosvelder.

Tables D-3.2, D-3.3 and D-3.4 respectively provide the fares for first, second and third-class passengers.

Children of 4 years and younger, accompanied by an adult in possession of a valid ticket, travel free of charge, but those between 5 and 12 years pay half the adult fare. Children aged 12 years and older pay the full adult fare.

#### 4.4 ROUTE UTILISATION

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

- a) Number of passengers
- b) Number of seats

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

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 captured main routes:

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

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

TABLE 4.4.1: AVERAGE NUMBER OF TAXI TRIPS IN THECAPRICORN DISTRICT			
Local Municipality	AM PEAK (06:00 to	<b>PM PEAK (15:00 to</b>	
	09:00)	18:00)	
Polokwane	1,2	1,0	
Aganang	1,2	1,0	
Blouberg	1,0	1,2	
Molemole	1,0	1,1	
Lepelle-Nkumpi	1,0	1,1	

The busiest route was the route between Seshego and Polokwane (with 7 833 passengers in the morning peak and 5 038 during the afternoon peak). The utilisation of the seats indicated that the taxis always departed when full. What was however most surprising was that taxis on average still only did just over 2 trips per morning peak and an average of 1,75 trips during the afternoon peak. The two trips per taxi for the Seshego–Polokwane route are very low, but still the highest of all routes in the CDM. The second-busiest route is the route between Borgwell and Polokwane, with 3 267 and 1 344 passengers during the morning and afternoon peak periods respectively. Utilisation of the available services was relatively low with 91% during the morning peak compared with 100% during the afternoon peak. The economic viability was very low with 1,73 trips per taxi during the morning peak and 1,36 trips during the afternoon peak. 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 much more detailed information is available as part of the database.

No route utilisation surveys were conducted for the bus services.

#### 4.5 WAITING TIMES

Detailed calculations were done, 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 passenger queue
- i) Average passenger queue
- j) Maximum vehicle queue
- k) Average vehicle queue

The above-mentioned detailed waiting time calculations were conducted for the each local municipality. Tables F-1 to F-5 of Appendix F of this report contain the respective results for the following:

- a) Table F-1: Polokwane Municipality
- b) Table F-2: Aganang Municipality
- c) Table F-3: Blouberg Municipality
- d) Table F-4: Lepelle-Nkumpi Municipality
- e) Table F-5: Molemole Municipality

Table F-6 of Appendix F was prepared to indicate the results for the Capricorn District. In conclusion, the CDM-CPTR database contains all the detailed information about waiting times.

#### 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 realise that the numbers determined as part of this report only reflect the information obtained in the field for a specific day and peak period, as part of the CDM-CPTR, with specific reference to the taxi industry. It is therefore possible that for various reasons a taxi operator did not operate on the day when the survey was conducted and therefore such an operator has not been included in the calculations.

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

- a) Taxi operators
- b) Bus operators

The table below shows the total number of different taxis operating in the Capricorn District for each of the local municipalities. Table 4.6.1 shows that 1 436 taxi vehicles were observed in the CDM area during the survey, and 964 vehicles were in the Polokwane LM. The lowest number was observed in the Molemole LM, namely 47 vehicles. 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.

TABLE 4.6.1: OPERATIONAL TAXIS INTHE CAPRICORN DISTRICT MUNICIPALAREA AND LOCAL MUNICIPALITIES		
Local Municipality	Number of taxis	
Polokwane	964	
Aganang	191	
Blouberg	129	
Lepelle-Nkumpi	249	
Molemole	47	
Capricorn DM	1 436	

It is important to take note that the sum of the operational vehicles for all the respective municipalities is higher than the number of operational vehicles in the CDM, since some of the taxis are operating in two local municipalities.

There are 196 buses in operation in the CDM and they all operate from the Polokwane Local Municipality.

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

- a) Table G-1: Taxi associations operating in the Capricorn District.
- b) Table G-2: Subsided and none-subsidised bus operators in the Capricorn District.

# 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 the 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 the comparison at this stage.

#### Chapter

#### 5. FINDINGS AND RECOMMENDATIONS

#### 5.1 FINDINGS FROM THE CPTR PROCESS

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

- a) Facilities
  - There is a lack of public transport facilities, as more than 80% of the taxi facilities are informal and the Polokwane Bus terminus is in a poor state
  - The following figures illustrate the state of the ranks in the CDM area:
    - 7,5 % of taxi facilities are on-street ranks
    - 86 % of taxi facilities are informal ranks
    - 8,4 % of taxi facilities have lighting
    - 20,2 % of taxi facilities are paved
    - 15,9 % of taxi facilities have public telephones
    - 11,2 % of taxi facilities have offices
    - 15,9 % of taxi facilities have shelters
    - 16,8 % of taxi facilities has ablution facilities
- b) Capacity utilisation of ranks
  - The capacity utilisation of many of the informal ranks could not be measured, as there was no capacity or provision of facilities such as shelters, paving and amenities
  - Disorderly operations at informal or poorly planned ranks sometimes give rise to conflict among operators.
  - In the CDM there are a number of ranks, which are not utilised in the peaks as expected but are used for other services during the off-peaks. An example of such a rank is the Seshego Plaza Rank that is not used during the morning peak because the taxis are touting for passengers while operators who deliver shoppers to the Seshego Plaza during the day use it. There are many other ranks in the database that were inactive when the surveys were conducted.
- c) Routes
  - Of the 285 taxi routes in the CDM, 50% are in Polokwane LM, 8% in Aganang, 11% in Blouberg, 8,5%, in Molemole LM and 24% in Lepelle-Nkumpi.

- Of the 180 subsidised bus routes in the CDM, 60% are in Polokwane LM, 27% in Aganang, 1,7% in Blouberg, 0,6% in Molemole LM and 11% in Lepelle-Nkumpi.
- The only rail line is the route from Pretoria (Tshwane) to Makhado with the Polokwane Station being the major point of access for mainline passengers in the CDM area.
- d) Route utilisation survey
  - The routes are not all equally busy
  - The only message from the route utilisation analysis is that on all but one of the taxi routes the number of trips per taxi is less than two with some just reaching one trip per taxi during the peak, which gives two trips per day. These routes are not economically viable
  - No route utilisation survey was done for the bus services.
- e) Waiting times
  - The results of waiting-time surveys only make sense if they are examined for the individual routes
  - 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.
- f) Operational vehicles
  - The route utilisation survey noted 1 436 taxi vehicles that provided services in the CDM area during the survey periods (06:00 to 9:00 and 15:00 to 18:00)
  - There were 964 taxis noted in the Polokwane LM area, 191 in Aganang LM, 129 in Blouberg LM, 249 in Lepelle-Nkumpi LM and 47 in Molemole LM.
  - There were 196 buses in operation on the subsidised routes in the CDM area
  - There are very few metered taxis in operation in the CDM area, but it is necessary to formalise this mode of transport as the operators do not operate as required by the law which eliminate the difference between the metered and minibus taxi to a large extent.
- g) Comparison of information of the Board and Registrar of Taxis with CPTR information
  - Despite numerous efforts to obtain the 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
  - There seemed to be a lack of capacity in various departments to operate the RAS and LPTS without the assistance of Fischer and Associates

 The intended comparison can be done whenever the RAS and LPTS information becomes available.

#### 5.2 RECOMMENDATIONS

It is recommended that:

- a) As the results of the CPTR surveys indicate a general over-supply of taxis, no permits should be considered before the OLS has been compiled and approved.
- b) The CPTR information as available on the database should be used to develop an Operating Licence Strategy (OLS) as guidance to the Operating Licensing Board with regard to the issuing of new permits.
- c) The CPTR information should furthermore be used for developing a Public Transport Plan which would guide the implementation of Public Transport projects and strategies, and could serve as input into the Integrated Transport Plan (ITP)

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#### Chapter

#### 6. **BIBLIOGRAPHY**

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