STELLENBOSCH

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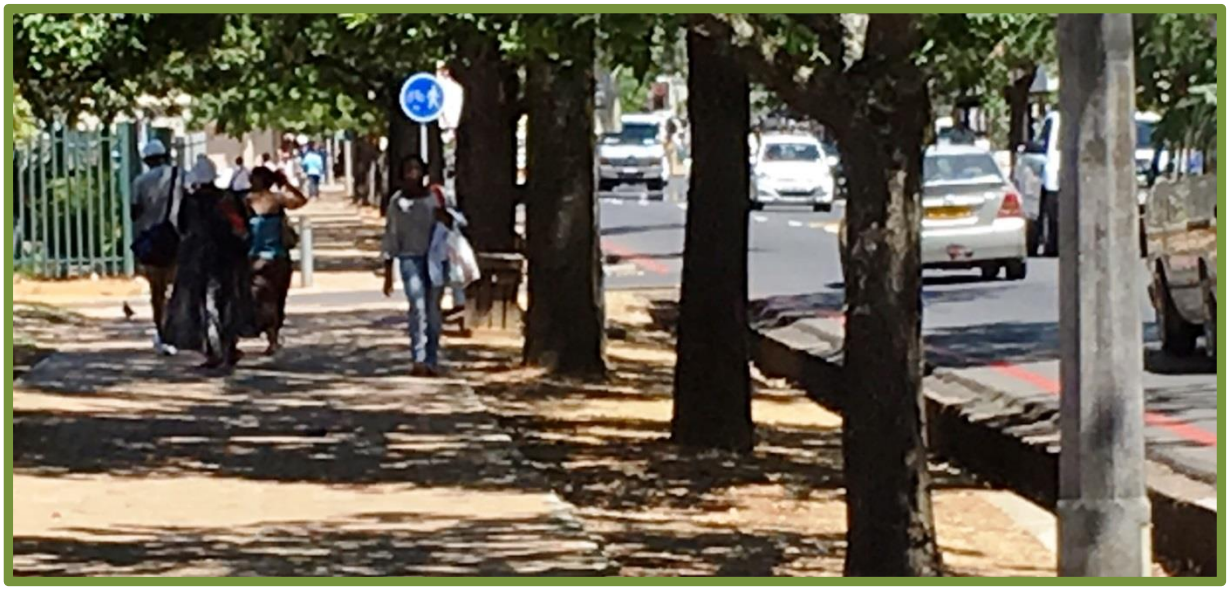
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

INNOVATION CAPITAL
ISIXEKO ESIZA NENGUQU
INNOVASIESTAD

COMPREHENSIVE INTEGRATED TRANSPORT PLAN 2016 – 2020



Final Report for Council Approval: 12 February 2016

Royal HaskoningDHV
Enhancing Society Together

MESSAGE FROM THE MAYOR OF STELLENBOSCH

MESSAGE FROM THE MINISTER OF TRANSPORT AND PUBLIC WORKS

EXECUTIVE SUMMARY

1. INTRODUCTION

- The Stellenbosch Comprehensive Integrated Transport Plan (CITP) is prepared in compliance with the National Land Transport Act (2009) and relevant Provincial legislation.
- The CITP is prepared in accordance with the requirements of the Department of Transport.
- The CITP is a Sector Plan of the Integrated Development Plan.
- The CITP covers the period 2016 – 2021.
- The CITP requires the approval of the MEC Transport and Public Works.
- The CITP has been prepared in consultation with interested and affected parties.

2. TRANSPORT VISION AND OBJECTIVES

- The transport **VISION** of the CITP is:
  - **A sustainable transport system that provides for the basic mobility needs of individuals, supports a vibrant economy and operates seamlessly within and across the municipal boundaries**
- The **VISION** takes into consideration relevant national and provincial policies and legislation, the Western Cape Government's strategic goals and the five strategic focus areas of the Integrated Development Plan of the Stellenbosch Local Municipality.
- The **OBJECTIVES** of the CITP are represented by the principles of:
  - Preferred Investment Destination (Upgraded infrastructure, reduction of congestion, improved public transport)
  - Dignified Living (Universally accessible transport for all, alignment with development priorities, choice of mode of transport)
  - Safest Valley (Follow best practice design, provision of learner transport, safe and efficient public transport)
  - Greenest Municipality (Support modal shift to public transport and non-motorised transport (NMT), infrastructure to support sustainable development, maximize use of rail and integrate with public transport and NMT)
  - Good Governance and Compliance (Measure user satisfaction, formulate transport policy, strategies, alignment of municipal and provincial planning)

3. TRANSPORT REGISTER

- The Transport Register of the CITP provides an overview of the status of the transport system and identifies trends and changes in the demographics of the area to which the transport system must adapt.
- The Transport Register assists in identifying shortcomings in the transport system and areas where improvement is needed.
- Information on the following aspects of the transport system is provided:
  - Utilisation of public transport services and facilities
  - The status and condition of public transport facilities and infrastructure
  - The percentage utilisation of the various modes of transport
  - The status and condition of the road network
  - Freight transport information
  - Financial information
- Synopsis of the Stellenbosch transport system:
  - Total Population of Stellenbosch: 155 733
  - Public Transport (Rail):
    - Railway Line: 18km
    - Seven Stations
    - Minimum / maximum boarding / alighting: 1 000 – 7 500 pax
    - Trains per Peak Hour: 2
    - Line capacity utilization: < 50%
  - Public Transport (Bus):
    - Routes operated: 1 (Stellenbosch – Strand)
    - Service operated: 1 return trip per week-day
  - Public Transport (Minibus Taxi):
    - Routes operated: 43
    - Vehicle Trips per Peak Hour: 104
    - No Vehicles: 114 (Surveyed)
    - No. Operating Licences Issued: 157
  - Public Transport (Long Distance Bus):
    - Routes operated: 9
    - No. Operators: 3

- Modal Split:
  - Light Vehicles: 87%
  - Minibus Taxi: 7.5%
  - Bus: 4.5%
  - Heavy Vehicles: 1.5%
- Roads and Traffic:
  - Road Length: Municipal Road Network: 309 km
    - 303.3 km Butumen Paved Roads
    - 5.7 km Block Paved Roads
  - 37 m Concrete Paved Roads
- Road Condition:
  - Road Surfacing:
    - Very Good – 31%
    - Good – 26%
    - Fair – 25%
    - Poor – 15%
    - Very Poor – 4%
  - Structural Condition:
    - Very Good – 51%
    - Good – 32%
    - Fair – 5%
    - Poor – 9%
    - Very Poor – 4%
- Congested Main Roads:
  - The R304 before its intersection with the R44
  - The R44 south between Paradyskloof and the van Reede intersection
  - Bird Street between the R44 and Du Toit Street
  - Merriman and Cluver Streets between Bird Street and Helshoogte Road
  - Dorp Street between the R44 and Piet Retief Street

- Adam Tas Road between its junction with the R44 an Merriman Street
- Piet Retief Street
- Van Reede and Vrede Streets between the R44 and Piet Retief Street

4. SPATIAL DEVELOPMENT FRAMEWORK

≈ the SDF provides a clear direction of the land development strategies of the Stellenbosch Municipality and identifies focus areas of the CITP including:

- transport corridors and nodes
- areas identified for mixed use and densification in support of public transport
- measures to discourage urban sprawl

≈ The vision of the Provincial Land Transport Framework provides a framework for a transport system built on the pillars of sustainability, equity, access to opportunity in an economically efficient manner and safety that are taken into account to ensure cohesive planning with surrounding areas

≈ The following focus areas are identified:

- The need to increase road corridor capacities, public transport linkages along with cycling and walking facilities to support the development of increased land development densities
- The adoption of the principles of Transit Oriented Development (TOD) and Transport Demand Management (TDM) to reduce congestion of the road network as this negatively impacts economic growth and the "greenness" of the Municipality.
- The encouragement of the development of Non-motorised Transport (NMT) infrastructure and networks to reduce the demand for private car travel and improve the livability of neighborhoods and communities within the area.
- The rail system should remain the backbone of the transport system in the functional region so rail capacity and infrastructure maintenance should receive attention in the Integrated Transport Plan.

5. TRANSPORT NEEDS ASSESSMENT

≈ The Transport Needs Assessment provides a summary of the needs for new or improved transport services or infrastructure identified through an analysis of information collected, strategies for the development of Stellenbosch and through the consultation process.

- The following key needs were identified for inclusion in the CITP strategies:
  - The need for a high quality, sustainable public transport system
  - The need to improve accessibility to transport for Learners and persons with disabilities
  - The need to improve facilities for cycling in Stellenbosch as well as the surrounding, smaller settlements and rural areas
  - The need to improve mobility on the major road network by reducing congestion by the provision of alternative routes and corridors, where possible and the provision of NMT facilities.
  - The need to identify and source additional funding to implement plans included in the CITP
- The needs of the community were identified through a public consultation process. This information was used to identify projects, new or existing, that can be included in the CITP budget.

6. PUBLIC TRANSPORT OPERATIONAL STRATEGY

- The Stellenbosch Municipality, *as a Planning Authority*, is responsible for transport functions in terms of the National Land Transport Act (5 of 2009) including the planning and implementation of an efficient and affordable public transport service network and travel corridors
- There are several implications stemming from this responsibility that the Stellenbosch Municipality must consider. These are:
  - Financial implications: The cost of planning, infrastructure provision, purchase of vehicles, operation and maintenance
  - The necessity for consultations and negotiations with role-players on issues such as empowerment, training, compensation for loss of jobs or profits, negotiation of operating contracts
  - Municipal capacity to plan and monitor the system
  - The need for a clear procurement strategy
- The elements of an upgraded public transport service network are:
  - An integrated route network of short and long distance routes
  - New universally accessible vehicles (initially using existing vehicles)
  - Integration of rail, bus and minibus services on fixed timetables
  - A new and integrated ticketing system
  - Contracted operators (negotiated contract with existing operators)

- New transport infrastructure : terminals, shelters

≈ Guiding principles for the proposed Stellenbosch public transport service network are:

- Compliance with the Department of Transport guidelines for a Public Transport Network Grant and the Provincial Public Transport Institutional Framework
- Transformation and upliftment of the public transport industry
- To improve public transport services and quality of life of residents
- Phased development of the public transport system
- Financial sustainability

7. OPERATING LICENCE STRATEGY

≈ No road based public transport service may be operated without an Operating Licence issued by the Provincial Regulatory Entity in terms of the National Land Transport Act (NLTA).

≈ The purpose and objective of the Operating Licence Strategy (OLS) is to enable the Stellenbosch Municipality (SM) to make recommendations to the Provincial Regulatory Entity (PRE) based on the policies and strategies contained in its Comprehensive Integrated Transport Plan (CITP).

≈ The evaluation of Operating Licence (OL) applications follows the following procedure:

- An application for an OL is submitted to the PRE and is referred to the SM.
- The OL application is circulated to the appropriate persons / Departments internally within the SM.
- Evaluation of Supply and Demand: The OL application is checked against the available survey data of passenger demand on the applicable routes.
- The OL application is checked against the available survey data of rank, terminal or stops capacity serving the applicable routes
- The OL application is assessed as to its impact on the conceptual Public Transport Network Routes that are identified in the ITP, or will operate in parallel to or in conflict with any commuter rail services or bus services.
- The OL is checked against the record of outstanding warrants or convictions, previous convictions relating to the operation of public transport services and the ability of the applicant to operate the service in a manner satisfactory to the public.

- In terms of section 78 of the NLTA, if a licence has not been in use for more than 180 days, the licence can be cancelled. The licence holder must be asked to furnish, in writing, satisfactory reasons why the service has not been operated, after which the licence can be extended for a further 180 days or cancelled.
- If all the responses to the evaluation support the approval of the application, a letter of approval is then issued to the NPTR or the PRE with any conditions attached. If the responses do not support the application, a letter of rejection is then issued.

8. TRANSPORT INFRASTRUCTURE STRATEGY

≈ The Transport Infrastructure Strategy deals with the maintenance and provision of all types of transport infrastructure including infrastructure for non-motorised modes, road based modes and rail infrastructure. The following types of infrastructure projects are included:

- Infrastructure Maintenance: Maintenance and rehabilitation of roads, public transport facilities and traffic control equipment.
- Road Infrastructure: The construction of all classes of roads, bridges and associated stormwater, non-motorised infrastructure such as sidewalks and cycle tracks and traffic control equipment.
- Public Transport: Passenger facilities, dedicated rights of way and off-street facilities such as terminals and depots.

≈ A strategy is proposed to improve transport mobility on major roads linking Klapmuts and Somerset West and passing through Stellenbosch. Several alternatives have been identified for further investigation and consultation:

- Construction of a by-pass road to the west of Stellenbosch. This is a long term solution that has advantages and disadvantages.
- Travel Demand Management to reduce the reliance on cars and encourage the use of public transport
- Increase the capacity of existing roads for all users

9. TRAVEL DEMAND MANAGEMENT STRATEGY

≈ The objectives of Travel Demand Management (TDM) are far reaching and may include reducing traffic congestion by reducing the demand for car use, lifestyles, using infrastructure efficiently, reducing the environmental impacts of private transport, and supporting investments in public transport, walking and cycling (NMT).

≈ Several interventions, requiring further study, are proposed to achieve the above objectives:

- Studies:
  - Investigate and prioritise congestion bottlenecks to make more efficient use of road infrastructure
  - Improve road safety
  - Promoting NMT
  - Promoting public transport
- Programmes and Policy:
  - Enforce traffic laws that impact NMT activity, and by-laws governing use of public space
  - Review building design regulations and street design standards that impact on walkability
  - Develop campaigns to raise awareness of travel options, and to encourage a shift in behavior
  - Pursue possibility of establishing a car-share service
- Infrastructure:
  - Plan in more detail improved public transport services and develop an implementation plan
  - Develop shared parking structures to reduce impact of traffic on the historic town core
  - Undertake localised improvements for pedestrians, such as pedestrian-only signals, bulb-outs and street lighting along key routes

10. FREIGHT TRANSPORT STRATEGY

≈ The freight system forms an integral part of the transport network. Freight is moved by means of the road network which is managed by South African National Roads Agency Ltd as well as provincial and local government and the rail network, pipelines and ports which are managed and operated for the most part by Transnet

≈ The Western Cape Government is mandated with the control of overloading of freight vehicles. There are currently 9 weighbridges within the Province, 1 of which is within the Stellenbosch municipal boundary.

≈ Overloading is not adequately controlled and there is inadequate legal support for enforcement.

≈ In Stellenbosch, the inbound heavy vehicle traffic volume accounts for 1% of the morning peak period of the inbound traffic volumes and is not demanding of the road system capacity.

- In Franschhoek, approximately 29% of heavy vehicles are through traffic on the main road. Although an alternative heavy vehicle route may alleviate some pressure on the Franschhoek main road, the majority of heavy vehicle traffic is generated in the town and the surrounding farms and will continue to make use of the main road.
- Proposed Interventions:
    - Development of an infrastructure improvement programme
    - Improve law enforcement and overload control
    - Development of a strategic freight network
    - Promoting and endorsing a self regulatory entity such as the Road Transport Management System (RTMS)
    - Investigation of the feasibility of installing an additional weighbridge within Stellenbosch
    - Detailed freight surveys are required
    - Investigate the use of alternative / preventative measures to deter heavy haul vehicles from using the Franschhoek pass as an alternative to the current Huguenot Tunnel and potentially the N1 Winelands.

11.1 NON-MOTORISED TRANSPORT

- Non-Motorised Transport (NMT) can be described as; all means of transport that are human powered such as the modes of walking, cycling, animal-powered vehicles including variants such as small wheeled transport (skateboards, roller blades, push scooters and hand carts) and wheelchair travel.
- Non-motorised transport as a mode of travel and is the cheapest and healthiest mode of travel for the individual and the environment. The promotion of NMT is therefore critical to encourage economic development and dignified living in both rural and urban environments.
- The Stellenbosch Municipality prepared a NMT Policy in 2015 which defines the vision and objectives for NMT implementation in the area that strives to "facilitate a mobility environment where all transport modes are of equal importance."
- A market survey on cycling was conducted during the development of the Draft Stellenbosch Cycle Plan (2015). The results of this survey indicated that the main deterrents to cycling are traffic safety, the lack of cycling infrastructure and personal safety concerns.
- A NMT network plan for Stellenbosch was prepared in 2015 as well as a bicycle masterplan. These plans provide for the development of a network of sidewalks and cycle tracks, bicycle distribution, traffic calming, road traffic management and communication.

- In terms of the above plans, a number of NMT interventions and projects have been identified for inclusion in the CITP.

11.2 PUBLIC TRANSPORT SAFETY AND SECURITY

- Safety and security concerns are one of the main deterrents for potential public transport users. A strategy has been developed to address these concerns in an effective manner.
- The following strategy is proposed:
    - The maintenance and improvement of lighting at all the public transport facilities to improve the safety of commenters at night.
    - The establishment of a data base of crime incidences at public transport facilities and on-board vehicles.
    - A study be done to establish the levels and type of protection services available in rural and urban public transport systems to effectively tailor a strategy to the various communities.
    - The auditing of public transport infrastructure design projects against security criteria developed by the CSIR.
    - The cleaning of public transport facilities of litter and graffiti so as to create a sense of safety amongst commuters who use the facility.

12 FUNDING STRATEGY AND SUMMARY OR PROPOSALS AND PROGRAMMES

- The key focus of projects, proposals and budgets of the CITP is to enable and contribute to economic growth, improved accessibility, equitable transport for all and a safe environment while ensuring environmental sustainability and good governance.
- The projects and proposals contained in this CITP comprise the following project types:
    - **Roads and Stormwater:** Maintenance, road construction and upgrading, street lighting and construction projects such as parking areas.
    - **Traffic Engineering:** Traffic calming, signage, traffic signals, intersection improvements, road marking, road safety improvements.
    - **Non-motorised Transport:** Sidewalks, lock-up facilities for bicycles, pedestrianisation projects, cycle tracks and shared facilities.
    - **Public Transport:** Public transport facilities (ranks, railway stations, shelters)
    - **Support Infrastructure and Vehicles:** Upgrading of municipal facilities and the purchasing of vehicles.
    - **Planning**: Preparation of integrated transport plans and strategies, feasibility studies, masterplans.

- The proposed Stellenbosch Municipality CITP Five Year Budget comprises an average spend over five years (2016/17 – 2020/21) of R 270 000 000, including major new projects that could be implemented in stages.
- The primary sources of funds are the Stellenbosch Municipality and the Western Cape Government. It is proposed that the Public Transport Service Network be funded from the Public Transport Network Grant (PTNG) and that applications in the standard format be submitted to the Department of Transport in this respect.
- It is recommended that to ensure that additional funding is provided to implement high priority transport projects in the Stellenbosch Municipal Area:
    - A Committee be appointed by the Stellenbosch Municipality with representation from the relevant Municipal Departments, the Western Cape Government and other relevant agencies to formulate firm proposals for the funding of the projects listed in the CITP Five Year budget.
    - The Stellenbosch Municipality establish a Municipal Land Transport Fund into which the funds must be paid for use in implementing the CITP.

13 STAKEHOLDER CONSULTATION

- Stakeholder consultation was conducted by means of:
    - A survey questionnaire
    - A public meeting held in Stellenbosch
- The priority issues from the survey questionnaire and the public meeting were:
    - The lack of a regular and reliable public bus service in Stellenbosch and to surrounding areas is the highest priority and the main focus in the next five years.
    - The second priority is the need to build new roads to provide alternative routes and relieve congestion in and around Stellenbosch.
    - The creation of more parking in the Stellenbosch CBD.
    - The improvement of cycling and pedestrian routes and safety in Stellenbosch.

ACRONYMS

AFC	Automated Fare Collection
ASGISA	Accelerated and Shared Growth-South Africa
BRT	Bus Rapid Transit
CBD	CENTRAL Business District
CITP	Comprehensive Integrated Transport Plan
COCT	City of Cape Town
CSIR	Council for Scientific and Industrial Research
CWDFS	Cape Winelands District Freight Strategy
DM	District Municipality
DTPW	Department of Transport and Public Works
DWA	Department of Water Affairs
EDSM:	Electricity Demand Side Management Grant
EIA	Environmental Impact Assessment
EMME/4	Computer modelling software brand name
EST	Environmentally Sustainable Transport
GABS	Golden Arrow Bus Service
GDP	Gross Domestic Product
GIPTN	George Integrated Public Transport Network
GIS	Geographic Information System
GPS	Environmental Science. the quality of not being harmful to the environment or depleting natural resources, and thereby supporting long-term ecological balance:
HOV	High Occupancy Vehicle
IDP	Stellenbosch Municipality Integrated Development Plan
IDP	Integrated Development Plan
IDP	Integrated Development Plan
IMQS	Integrated Quality Management System
Integrated	Combining or coordinating separate elements so as to provide a harmonious, interrelated whole
IPC	Intermodal Planning Committee
IPTN	Integrated Public Transport Network
IRT	Integrated Rapid Transit
ITP	Integrated Transport Plan
ITS	Intelligent Transport System
KPI	Key Performance Indicator
KZN	Province of Kwa-Zulu Natal

LED	Local Economic Development
LEP	Large Employer Programme
LM	Local Municipality
LRT	Light Rail Transit
LTPF	Long-term Planning Framework
MBT	Minibus Taxi
MIG	Municipal Infrastructure Grant
Modal Split	A modal share (also called mode split, mode-share, or modal split) is the percentage of travellers using a particular type of transportation or number of trips using said type.
MTEF	Medium Tern Expenditure Framework
NATMAP	National Transport Masterplan
NDP	National Development Plan
NLTA	National Land Transport Act No 5 of 2009
NLTSF	National Land Transport Strategic Framework
NMT	Non-Motorised Transport
NPTR	National Public Transport Regulator
NSDP	National Spatial Development Perspective
OECD	Organisation for Economic Co-operation and Development
OL	Operating Licence
OLRC	Operating Licence Recommendations Committee
OLS	Operating Licence Strategy
OLS	Operating Licence Strategy
PA	Planning Authority
PLTF	Western Cape Provincial Land Transport Framework
PMS	Pavement Management System
POS	Public Open Space
PPTIF	Provincial Public Transport Institutional Framework
PRASA	Passenger Rail Agency of South Africa
PRE	Provincial Regulatory Entity
PRE (RE)	Provincial Regulatory Entity
PSDF	Western Cape Provincial Spatial Development Plan
PSDF	Western Cape Provincial Spatial Development Framework
PTNG	Public Transport Network Grant
PTSN	Public Transport Service Network
RSR	Rail Safety Regulator
RTMS	Road Transport Management System
RTMS	Road Transport Management System

SDF	Stellenbosch Municipality Spatial Development Framework
SDF	Spatial Development Framework
SM	Stellenbosch Local Municipality
Sustainability	The ability to be sustained, supported, upheld, or confirmed. The quality of not being harmful to the environment or depleting natural resources, and thereby supporting long-term ecological balance
TCT	Transport for Cape Town
TDM	Travel Demand Management
TOD	Transit Oriented Development
TOD	Transit Oriented Development
TR	Transport Register
UN	United Nations
US	University of Stellenbosch
WC	Western Cape
WCG	Western Cape Government
WSSD	World Summit on Sustainable Development
AFC	Automated Fare Collection

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1. INTRODUCTION

SYNOPSIS:

- The Stellenbosch Comprehensive Integrated Transport Plan (CITP) is prepared in compliance with the National Land Transport Act (2009) and relevant Provincial legislation
- The CITP is prepared in accordance with the requirements of the Department of Transport
- The CITP is a Sector Plan of the Integrated Development Plan
- The CITP covers the period 2016 – 2021
- The CITP requires the approval of the MEC Transport and Public Works
- The CITP has been prepared in consultation with interested and affected parties

1.1 PURPOSE

This Comprehensive Integrated Transport Plan has been prepared for the Stellenbosch Local Municipality in terms of Chapter 4 of the National Land Transport Act (No. 5 of 2009) for the purpose of:

- Giving structure to the function of municipal planning mentioned in Part B of Schedule 4 of the Constitution
- Fostering integration between land development and land use planning
- Forming an essential part of the Integrated Development Plan of the Municipality
- Giving effect to national and provincial transport strategies and policies
- Providing plans and strategies for the improvement of transport infrastructure and systems to foster economic and social growth and to improve the quality of life of the residents in the Municipality.

1.2 LEGISLATIVE REQUIREMENTS

This Comprehensive Integrated Transport Plan (CITP) has been prepared in compliance with section 36 of the National Land Transport Act (No. 5 of 2009), (NLTA), and the "Minimum Requirements" for the preparation of Integrated Transport Plans published in Government Gazette No. 30506 (November 2007). The Stellenbosch Local Municipality has been designated as a "Type 1" Planning Authority by the MEC Transport and Public Works. In terms of the Minimum Requirements a Type 1 Planning Authority must prepare a Comprehensive Integrated Transport Plan every five years and must update the CITP annually.

The Stellenbosch Municipality CITP was prepared in 2010 / 2011 for the five year period between 2011 and 2015 and was approved by the MEC Transport and Public Works on 15 July 2011. The CITP was subsequently updated in 2013 and 2014. This CITP comprises a major overhaul of the CITP and covers the five year period from 2016 to 2021. The Minimum Requirements have been closely followed in the preparation of the CITP as well as in the structure and content of the chapters.

In the approval of the 2011 CITP the MEC recommended that the following matters be addressed in subsequent updates:

- The inclusion of projects on the proclaimed road network must be addressed.
- The shortage of parking should be used to motivate the provision of integrated public transport services for Stellenbosch and the Department of Transport and Public Works, the City of Cape Town and the Stellenbosch University should support the Stellenbosch Local Municipality in this respect.
- The development and implementation of a non-motorised transport plan is an important strategy to address the severe traffic congestion in Stellenbosch and the Stellenbosch Local Municipality should engage the City of Cape Town regarding transport needs between the different Municipalities.
- The Stellenbosch Local Municipality should plan its transport needs in conjunction with the City of Cape Town and the Drakenstein Municipality.

The MEC Transport and Public Works further recommended that the Department of Transport and Public Works will only commit funding where there are already formal agreements in place between the Province and the Stellenbosch Local Municipality.

The above matters have received attention and the outcomes are included in the CITP. In particular, the planning of an Integrated Public Transport System for Stellenbosch forms an integral component of the CITP (Chapter 6) and the preparation of a non-motorised transport plan has received attention and is included in Chapter 11.

1.3 INSTITUTIONAL AND ORGANISATIONAL ARRANGEMENTS

The preparation of the 2015 CITP has been directed by a Project Management Team comprising of representatives of the Stellenbosch Local Municipality: Directorate of Engineering Services (Transport Planning), Western Cape Government Department of Transport and Public Works and the Professional Technical Team. Other Directorates of the Stellenbosch Local Municipality (Financial Services, Strategic and Corporate Services and Planning and Economic Development) were consulted when necessary.

The Stellenbosch Local Municipality is represented on the following bodies through which coordination with other Municipalities on land use and transport matters is facilitated:

- Land Transport Advisory Board
- Intermodal Planning Committee

The above bodies are constituted in terms of the NLTA and are convened by the City of Cape Town, Transport for Cape Town.

1.4 LIAISON AND COMMUNICATION MECHANISMS

An extensive consultation process has been followed throughout the preparation of the 2015 CITP as stipulated in the Minimum Requirements. The consultation process and the outcomes are documented in Chapter 13.

The Cape Winelands District Municipality and the Drakenstein District Municipality District Integrated Transport Plans were prepared simultaneously with the Stellenbosch CITP and the plans and recommendations of these DITP's have been synchronized with those of the Stellenbosch CITP.

The Western Cape Provincial Government and the City of Cape Town were consulted to further define matters affecting planning in the Cape Town function region such as the major road network, public transport and freight linkages and the outcome of the consultations has been included in the relevant Chapters.

2. TRANSPORT VISION AND OBJECTIVES

SYNOPSIS:

- The transport VISION of the CITP is:
  - **A sustainable transport system that provides for the basic mobility needs of individuals, supports a vibrant economy and operates seamlessly within and across the municipal boundaries**
  - The VISION takes into consideration relevant national and provincial policies and legislation, the Western Cape Government's strategic goals and the five strategic focus areas of the Integrated Development Plan of the Stellenbosch Local Municipality.
- The OBJECTIVES of the CITP are represented by the principles of:
  - Preferred Investment Destination (Upgraded infrastructure, reduction of congestion, improved public transport)
  - Dignified Living (Universally accessible transport for all, alignment with development priorities, choice of mode of transport)
  - Safest Valley (Follow best practice design, provision of learner transport, safe and efficient public transport)
  - Greenest Municipality (Support modal shift to public transport and non-motorised transport (NMT), infrastructure to support sustainable development, maximize use of rail and integrate with public transport and NMT)
  - Good Governance and Compliance (Measure user satisfaction, formulate transport policy, strategies, alignment of municipal and provincial planning)

2.1 INTRODUCTION

The transport vision and objectives of the CITP has been reviewed taking into consideration the current legislative and policy environment and relevant role-players have been consulted through a workshop process. Previous CITP's and revisions thereof have comprehensively documented the provisions of the National Land Transport Act (No. 5 of 2009), in terms of which this CITP has been prepared, as well as national and provincial transport policy instruments. More focus, in the current CITP, has now been given to developmental strategies, and in particular current thinking on spatial planning initiatives. These are summarised below.

2.2 OVERARCHING STRATEGIES, GOALS AND OBJECTIVES

2.2.1 National Planning Tools

- **Constitution of South Africa**

Local Government, as conceived of in the Constitution of the Republic of South Africa (Act 108 of 1996), is mandated to "*carry out a number of developmental duties*". Chapter 7 articulates this mandate as:-

- Provide democratic and accountable government for local communities
- Ensure the provision of services to communities in a sustainable manner
- Promote social and economic development
- Promote a safe and healthy environment
- Encourage the involvement of communities and community organisations in the matters of local government

The promotion of the Bill of Rights, which reflects the nation's values about human dignity, equality and freedom, is also a responsibility of local government.

With respect to the governance of different aspects of spatial and land use planning, government (national, provincial and local) has introduced a number of policies and legislation concerned not only with regulating uncontrolled development but also facilitating appropriate development.

- **National Spatial Development Perspective**

The National Spatial Development Perspective (NSDP) provides the overarching framework for spatial planning in South Africa. It is the intent of the Department of Land Affairs that the principles contained therein will form the basis for spatial development frameworks that eradicate spatially segregated growth patterns that still exist at the municipal level.

The key objectives of the NSDP are to:

- Provide a framework within which to discuss the future development of the national space economy by reflecting the localities of severe deprivation and need, of resource potential, of infrastructure endowment and of current and potential economic activity by describing the key social, economic and natural resource trends and issues shaping the national geography.
- Act as a common reference point for national, provincial and local governments to analyse and debate the comparative development potentials of localities in the country by providing a coarse-grained national mapping of potential.

- Identify key areas of tension and/or priority in achieving positive spatial outcomes with government infrastructure investment and development spending
- Provide national government's strategic response to the above for a given time frame.

The NSDP guides government in implementing its programmes in order to achieve the objectives of Accelerated and Shared Growth-South Africa (ASGISA) and New Growth Path (NGP) of halving poverty and unemployment by 2014.

The NSDP is built on five basic principles to reach the above mentioned objectives. These principles include:-

- **Principle 1:** as a prerequisite for alleviating poverty, development must ensure sustained and inclusive economic growth
- **Principle 2:** local government is obligated (under the constitution) to provide basic services to all citizens where they reside
- **Principle 3:** government fixed investment should be focused on localities of economic growth and/or economic potential in order to gear up the private sector, stimulate sustainable economic activities and create long-term employment opportunities
- **Principle 4:** efforts to address past and current social inequalities should focus on people, not places
- **Principle 5:** future settlement and economic development opportunities should be channelled into activity corridors and nodes that are adjacent to or that link the main growth centres

- **National Development Plan 2011**

The National Development Plan (NDP) provides a vision for the future of South Africa that will eliminate both poverty and inequality by 2030. This basically involves the inclusion of the previously disadvantaged and segregated to have an active role in their development. The following challenges have been highlighted in the NDP:

- Too few people work
- The standard education of most black learners is of poor quality
- Infrastructure is poorly located, under-maintained and insufficient to foster higher growth
- Spatial patterns exclude the poor from the fruits of development
- The economy is overly and unsustainably resource intensive
- A widespread disease burden is exacerbated by a failing public health system
- Public services are uneven and are often of poor quality
- Corruption is widespread

- South Africa remains divided

The Objectives of the NDP:

- The active efforts of all South Africans in their development
- Redressing the injustices of the past effectively
- Faster economic growth and higher investment and employment
- Rising standards of education, a healthy population and effective social protection
- Strengthening the links between the economic and social strategies
- An effective and capable government
- Collaboration between the private and the public sectors
- Leadership from all sectors in society

The following are of importance to the Stellenbosch Comprehensive Integrated Transport Plan:

- An Economy that will create more jobs: In 2030 the economy shall be inclusive, dynamic and equitable such that the benefits of growth are shared by all South Africans.
- Improving Infrastructure: South Africa has missed a generation of infrastructure investment, to ensure growth and inclusivity there is a need for higher capital spending in both general and public investment. The target is for Gross fixed capital formation needs to reach about 30% of the GDP by 2030 to see a sustained impact on growth and household services.
- Transitioning to a low-carbon City: South African operations are currently resource intensive, there needs to be a shift towards a more sustainable existence, the challenges faced will be finding the balance between nature and development without segregating the poor.
- Reversing the spatial effects of apartheid: Spatial patterns must meet the needs of the citizens taking into account social, environmental and economic interests. Cities need to ensure that there is shorter travelling distances, denser cities and safe and reliable public transport.

- **National Transport Master Plan 2050**

The primary driver of the National Transport Master Plan (NATMAP) 2050, by the department of Transport, is “to develop a dynamic long-term and sustainable land use multi-modal transportation systems framework for the development of infrastructure facilities, interchange terminal facilities and service delivery that is demand responsive to national / provincial / district and/or any socio-economic growth strategies, and/or any sectorial integrated spatial development plans”.

NATMAP defines a number of overarching objectives to support its strategic intent, including the following:

- Maximizing utilisation of existing infrastructure facilities;
- Development of future infrastructure facilities and improve operations;
- Development of an up to date and accurate central land use / transportation Data Bank- Geographic information system)GIS);
- Promoting effectiveness and efficiency of maritime Transport;
- Integrating multi-modal public passenger transportation;
- Determining the economic role of transport; and
- Integration of transport and land use development.

- **National Airports Development Plan**

The vision for a South African airport network includes that it:

- Has sufficient capacity to handle air traffic, passenger, and freight volumes
- Is Integrated into the strategic transport network, spatial development and land use planning
- Is able to balance and meet the needs of airport users
- Is financially sustainable
- Complies with safety, security and environmental regulation, including noise and emissions
- Optimises contribution to socio-economic development and meeting government's wider objectives, both directly and indirectly through airport precinct development, and thereby helps to position South Africa competitively both on the continent and globally
- Is responsive to changing technologies

- **National Land Transport Strategic Framework**

The vision for land transport to improve transport services and infrastructure is often driven or influenced by other strategies as indicated in the Introduction and Chapter3. The NLTSF will help to enable the implementation of those strategies. Inevitably, therefore, the vision does not prescribe specific out comes, but guiding principles which can be responsive to other strategies as they emerge.

The overall vision of the Department for Transport in the context of the policy framework within which the NLTSF operates and current national imperatives is to create:

"An integrated and efficient transport system supporting a thriving economy that promotes sustainable economic growth, supports a healthier life style, provides safe and accessible mobility options, socially includes all communities and preserves the environment."

The following are key strategic objectives over the next five years:

- a much improved sustainable public transport system with better and safe access, more frequent and better quality services and facilities to an agreed standard;
- significant reduction in road fatalities;
- greater mobility options particularly for those who do not have a car;
- safer and easier cycling and walking;
- better infrastructure, link and interchange with other means of transport;
- an improved and better maintained road and rail network;
- improved journey time reliability on all modes;
- different travel patterns and transport usage and, where appropriate, reduced need to travel by motor vehicles from having achieved an integrated land use and transport system;
- a transport system that is consistent with the real needs of people living in different parts of South Africa and with differing abilities to afford travel;
- a transport system that charges the traveller a fair reflection of the costs of making a journey;
- a transport system that supports focused funding of transport priorities;
- developed sufficient institutional human capital to drive the vision of transport; and
- A transport response that supports rural transport development.

2.2.2 Provincial Planning Tools

- **Western Cape Government Strategic Goals**

With its five Provincial Strategic Goals, the Western Cape Government promises to "*provide you, your loved ones and communities with opportunities for jobs, education, growth and development*". Over the next five years the Western Cape Government is committed to:

- **Create opportunities for growth and jobs** - create an enabling environment to attract investment, grow the economy and create jobs by supporting high growth economic sectors.
- **Improve education outcomes and opportunities for youth development -** expand quality education across the province and providing opportunities for youth to realise their full potential.
- **Increase wellness and safety, and tackle social ills –** address health, safety and social ills by supporting healthy communities, a healthy workforce, and healthy families, youth and children.

- **Enable a resilient, sustainable, quality and inclusive living environment -** improve urban and rural areas through enhanced management of land, an enhanced climate change plan, and better living conditions for all.
- **Embed good governance and integrated service delivery through partnerships and spatial alignment** - deliver good governance and an inclusive society that increases access to information, in partnership with active citizens, business and institutions.

- **Department of Transport and Public Works Strategic Plan**

The Western Cape Government, Department of Roads and Public Works published its Strategic Pan for 2015/15 – 20119/20 in February 2015. The vision of the Department is:

"To lead in the delivery of government infrastructure and related services"

The vision is supported by the following strategic goals:

- Maximise empowerment and job creation in the Western Cape
- Manage provincial infrastructure and immovable assets in the Western Cape
- Deliver safe, efficient, integrated transport systems in the Western Cape
- Promote good governance, effectiveness, and efficiency throughout the DTPW

- **Provincial Land Transport Framework**

The goals and objectives of the PLTF are indicated in Table 2-1.

Table 2-1: PLTF Goals and Objectives

Goal	Objective
An efficient, accessible and integrated multimodal public transport system managed by capacitated and equipped municipal authorities	A 13% modal shift from private to public transport into Cape Town's CBD by 2014.
	Increase the number of commuter rail train sets in operation to 117 by 2016.
	Establish land-use incentives and NMT improvements around 10 underdeveloped public transport nodes of provincial significance by 2014 (Provincial key Projects).
	Fully implement a universally accessible and multimodal IRT phase 1a by 2014.
	Increase user satisfaction of public transport facilities by 25% by 2014.
	Organise courses and seminars dealing with infrastructure management, transport planning and land-use planning for

Goal	Objective
	district municipalities by 2014.
	Bring commuter rail network from D+ to a C maintenance level and A corridors by 2016.
	Bring minibus taxi recapitalisation rate up to a national level by 2016.
NMT as pivotal part of all forms of transport planning in urban and rural areas	Organise courses and seminars dealing with infrastructure management, transport planning and land-use planning for district municipalities by 2014.
	Dedicated NMT Expanded Public Works Program projects by 2014
	Every provincial road project in the province must include a NMT component.
	NMT Plans will be developed and implemented for each municipality of the Province, as a part of the mobility strategy and IPTN roll-out.
	Dedicated cycle lanes in the Western Cape must be doubled by 2014.
A well maintained and preserved transport system	Reduce the road transport infrastructure backlog by 16% by 2014.
	Bring commuter rail network from D+ to a C maintenance level on A corridors by 2016
	Introduce economic decisions support tools (multi-criteria assessment matrix) to facilitate decision making with regard to road investment by 2014.
A sustainable transport system	A 13% modal shift from private to public transport into Cape Town's CBD by 2014.
	Influencing parties in order to achieve a shift in contestable freight haulage from road to rail freight by 10% by 2014.
A safe transport system	Reduction of the number of fatalities of the Western Cape roads by 50% by 2014.
	The provincial and the cape metro incident management plan should be explained to include lower order roads by 2014.
	Implementation of an integrated transport safety management system by 2014.
A transport system that supports the province as leading tourist destination	Introduce economic decisions support tools to facilitate decision making with regard to road investment by 2014.

2.2.3 District Planning Tools

- **Cape Winelands District Municipality IDP**

The Cape Winelands District Municipality has as its vision "*A unified Cape Winelands of Excellence*".

The strategic objectives of the IDP can be summarised as follows:

- To ensure health and safety of communities
- To facilitate sustainable economic empowerment of all communities
- To support and ensure the development and implementation of infrastructural services
- To provide effective and efficient support services
- To ensure financial sustainability

2.2.4 Stellenbosch Local Municipality Planning Tools

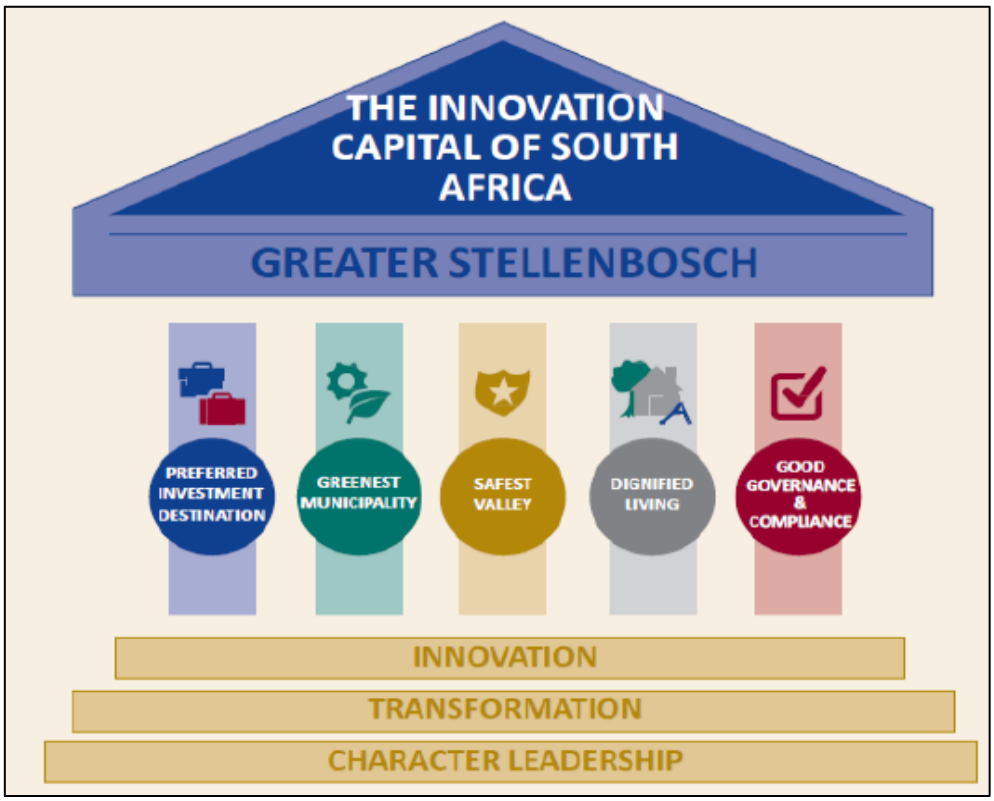
The Stellenbosch Local Municipality has a number of planning tools which are already aligned with National, Provincial and District planning. These planning tools provide context to the overall vision and developmental direction of the study area, and how transportation may assist with achieving this desired state.

- **Stellenbosch Local Municipality IDP**

The Stellenbosch Municipality, Integrated Development Plan had five strategic focus areas as indicated in Figure 2-1. The focus areas have relevance to the transport system in a number of ways as suggested below:

- **Preferred Investment Destination**: The provision of transport infrastructure improves accessibility and mobility and stimulates the economic environment.
- **Greenest Municipality:** The provision of a sustainable transport system.
- **Safest Valley:** The provision of traffic and transport law enforcement and the improvement of road safety.
- **Dignified Living:** Integrated planning of land use and transport and the improvement of mobility for the community to access work and education opportunities
- **Good Governance and Compliance:** The preparation of transport plans and strategies for the short and long term, efficient delivery of transport services.

Figure 2-1: Stellenbosch Local Municipality 2015/16 IDP (planning cycle 2012-2017)



- **Greater Stellenbosch SDF**

The final version of the Greater Stellenbosch SDF was adopted in February 2013. This SDF is structured around 7 key development principles[1]:

- **Provide public transport for all:** Develop more opportunities for all income groups to live and/or work within 1km of a train station or bus stop. It should not be necessary to have a car to be a citizen of Stellenbosch.
- **Create walkable neighbourhoods:** Provide safe spaces to walk and/or cycle between home, work, shops and services.
- **Grow the economy so that more people can get jobs:** Provide spaces to support the growth of existing businesses, stimulate the development of new businesses and create new employment and training opportunities for the poor.
- **Make wise use of our land:** Make better use of the land available in town to build more affordable multi-storey homes and flats to accommodate more people, instead of building in surrounding natural and farming areas.

[1] Note that the principles have been reworded to capture the intention and focus points of these principles

- **Conserve, restore and regenerate our resources:** Ensure that everyone has affordable services by saving electricity, providing more renewable energy, recycling all wastes (rubbish and sewage) and making sure that water is used carefully so that our children and their children will always have water.
- **Grow more food for ourselves:** Make best use of the fertile land within and outside the town to grow food, and improve access to healthy and affordable food for all income groups.
- **Care for our heritage:** Protect historic architecture and views, and prevent the pollution and destruction of the beautiful wilderness areas, parks, natural spaces, rivers, rolling hills and mountains.

- **Stellenbosch Quo Vadis 2015**

Quo Vadis is a Latin phrase meaning 'where are you going?' As its name suggests, this document aims to map the developmental path of the Stellenbosch area towards a more desirable spatial planning outcome. In particular it "*responds to poverty and the rising cost of natural resources by envisaging the future of Stellenbosch as a* ***compact****,* ***sustainable****,* ***inclusive town****".* This is defined in the document as:

- ***Compact town*** - high density living rather than sprawled out suburbia
- ***Sustainable town*** - living in a way that restores rather than destroys the natural ecosystems we all depend on
- ***Inclusive town*** - ensuring that poverty is eradicated and everyone feels included in more equitable economic growth and development.

The Quo Vadis document describes strategies that will need to be implemented in order to achieve this vision of a *compact, sustainable, inclusive town*:

- Ensure that everyone can access the public and non-motorised transport system within 500 meters of their homes and work
- Sufficient funding has been made available to get rid of service backlogs and cater for future needs
- Densification has taken place within the existing built footprint
- An inclusive knowledge economy has been built that includes a major role for a university-based 'education brain port'

It is acknowledged that over the next twenty years development will need to be focussed on strategic points in order to ensure that such objectives can be met. The main focus of this development can be summarised as Transit-Oriented Development (TOD). Stellenbosch Local Municipality has already begun an investigation of the potential for TOD within its boundaries, and the findings will inform the CITP.

- **LED Strategy and Action Plan**

Stellenbosch launched its 'LED Strategy and Action Plan' in June 2014. Under this plan a range of initiatives have been identified to (1) help to grow the economy, (2) improve the competitiveness of small enterprises, (3) increase property values and (4) build a public sector that values and supports local economic activity. Of the initiatives proposed the following have spatial or transport planning implications:

- Amend zoning to allow agri-processing and tunnel farming in certain areas
- Make more land available for agriculture by finalising the 'Land Availability Strategy'
- Use Die Braak and the Old Rhenish Complex in the town centre to create spaces for new businesses
- Provide more space for development close to transport infrastructure, incorporating Smart City principles
- Link the central town with Kayamandi and the Wood Mill area
- Support transit-oriented development by finalising the 'Transport Plan'
- Increase supply of middle income and infill housing by promoting focused and mixed-use developments
- Unlock property value in townships through community spaces and commercial nodes
- Amend zoning to allow for mixed usage and expansion of Techno Park

- **Environmental Management Framework**

The Greater Stellenbosch SDF and the approved Stellenbosch Environmental Management Framework includes a number of strategies to address some of these issues. Those of relevance to the spatial planning of Stellenbosch town include (CNdv Africa 2010):

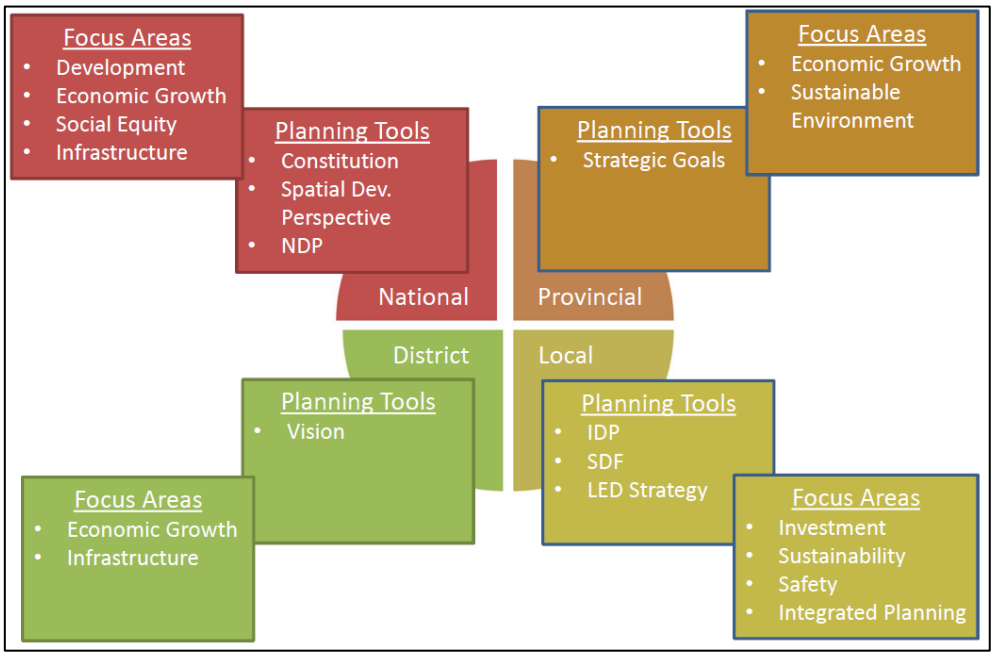
- Implementing river conservation zones of between 10 m and 30 m in width (depending on the width and maturity of the river) on each bank to protect riverside ecosystems from all human activities except for passive recreational pursuits
- Upgrading waste water treatment works to achieve minimum DWA water quality standards
- Focusing development in low-density areas, infill, and brownfield land before considering greenfield sites
- Encouraging forms of tourism that reinforce Stellenbosch's unique sense of place

- Encouraging landowners outside formal conservation areas to conserve endangered and critically endangered vegetation types, and to link with existing conservancies
- Supporting projects to eradicate alien vegetation in non-agricultural areas
- Protecting conservation areas as a means of ensuring water quality and quantity
- These guidelines need to be carried through into the Stellenbosch town plan, and enhanced with more specific principles relevant to the town in order to protect its natural heritage

- **Summary of Overarching Strategies, Goals and Objectives**

The above sections discuss the various overarching strategies which govern the proposals in the CITP for the Stellenbosch Municipality. These strategies provide directives for the vision and objectives to be achieved in the Municipal area. Figure 2-2 visually illustrates these strategies, goals and objectives.

Figure 2-2: Overarching Strategies, Goals and Objectives

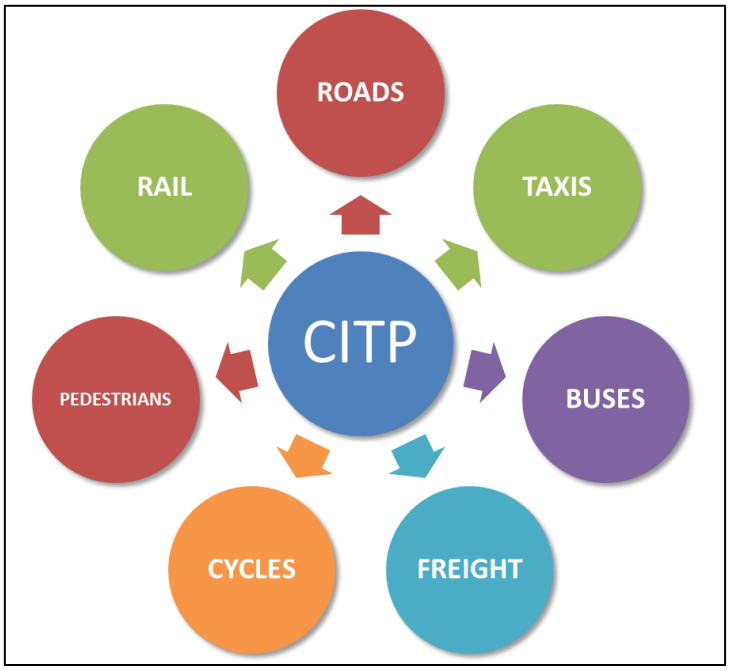


2.3 LOCAL TRENDS, CHALLENGES AND OPPORTUNITIES

2.3.1 Transport Elements and Dimensions

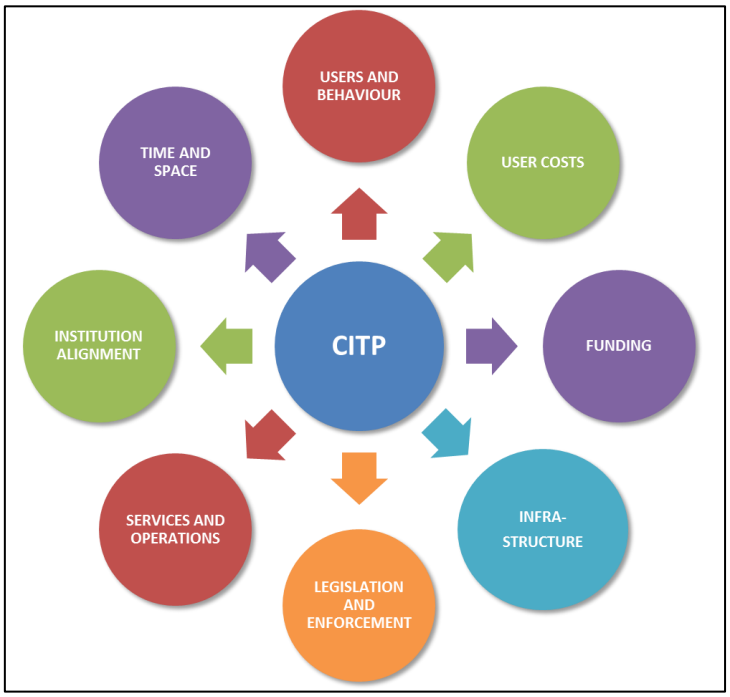
The transport system is comprised of distinctive elements, as indicated in Figure 2-3, which in turn must be addressed by the strategies contained in the CITP.

Figure 2-3: Transport Elements



The transport elements have dimensions, indicated in Figure 2-4, that influence and interact and affect the performance of the transport system.

Figure 2-4: Transport Dimensions



A scan of the transport environment within the Stellenbosch Municipality was undertaken to determine current trends, challenges and opportunities that can inform the formulation of a transport vision and objectives for the CITP. These were presented to a workshop of the

role-players for consideration and comment. A summary is shown below. In addition a number of specific issues were noted at the workshop that need to be addressed within the projects and processes contained in the CITP. These are listed in Chapter 5: Transport Needs Assessment.

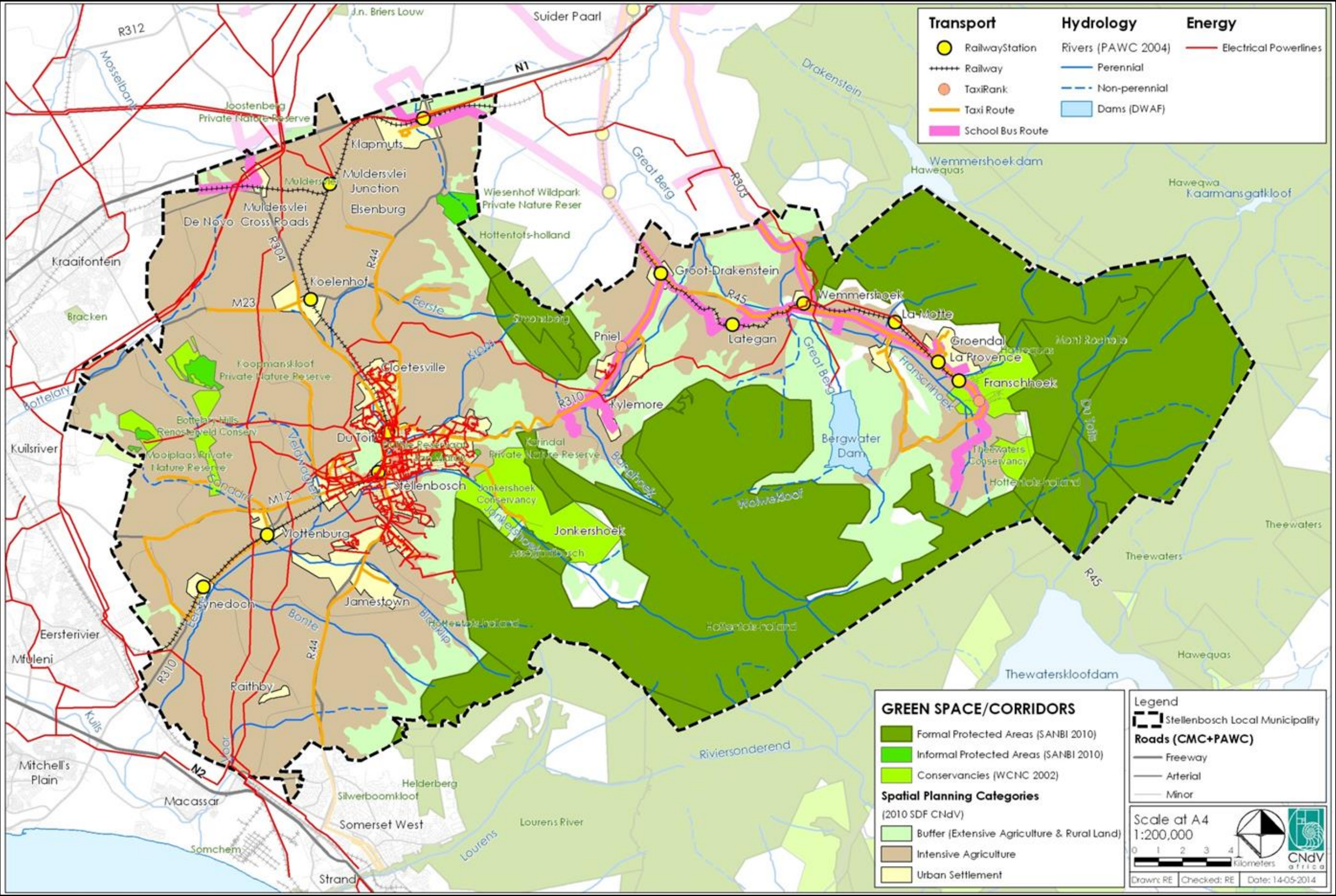
2.3.2 New Spatial Vision

The Stellenbosch SDF and more recently the Stellenbosch Quo Vadis 2015 (see section 2.2.4) sets out the proposed land development strategy. The following issues are highlighted in the strategy for consideration in the CITP:

- Provide Public Transport for All
- Create Walkable Neighborhoods
- Grow the Economy so that more People can get Jobs
- Make wise Use of Our Land
- Conserve, Restore and Regenerate Our Resources
- Grow More Food For Ourselves
- Sustainable Transit Oriented Development
- Current and Potential Development Opportunities
- Integrated Mobility Network
- Regenerative Design of Urban Innovations Applicable to Stellenbosch

The broad land use vision and structuring axes, relative to the transport system are indicted in **Error! Reference source not found.**. Refer also to Chapter 4.

Figure 2-5: Structuring Axes



2.3.3 Key Policy Shifts and Trends

The following key policy shifts and trends have been identified from an analysis of the spatial vision:

- Densification of development within the urban footprint
- Provision of access to public transport and non-motorised transport within 500m of home / work destinations
- Secure sufficient funding needs to address backlogs and future needs
- Rationalisation of public transport services
- Development of an Integrated Public Transport Network
- Provision of public transport linkages to surrounding Municipalities
- Development of high density, socially mixed nodes around rail stations

2.3.4 Issues and Concerns

The following transport issues and concerns were identified:

- Population and Traffic Growth
  - Population growth = +-2.7% p.a.
  - Low income population growth = 40% (2001 – 2011)
  - High growth in traffic volumes (up to 6% on main routes)
  - Increase in through traffic
  - Inadequate NMT infrastructure for increase in pedestrians and use of bicycles
  - High demand for parking
- Transport Costs
  - Long travel distances for commuters – high costs
  - Cost of traffic congestion :
  - Loss of productivity (time costs),
  - Economic inefficiency,
  - Poor service delivery,
  - Increase in accidents,
  - High fuel costs,
  - Vehicle emissions
  - Cost of parking provision – land, parking structures
- Availability of Transport Services
  - No formalised public transport system

  - Lack of integrated public transport links with Cape Town
  - Usage of rail transport can be improved
  - Local freight (agriculture and construction) – improved traffic management and infrastructure required to accommodate growth
- Availability and Condition of Transport Infrastructure
  - Main road network in a good condition
  - Minor roads need to be upgraded
  - Inadequate public transport facilities (terminals, ranks, amenities) – poor condition
  - Railway stations require upgrading with improved access for pedestrians
  - Sidewalks and cycle tracks network needs expanding
  - Lack of NMT infrastructure providing safe, direct and continuous links between communities and the Stellenbosch town.
- Institutional Capacity
  - Internal capacity required to carry out:
  - public transport functions,
  - law enforcement
  - provision of infrastructure
  - On-going liaison with:
  - Winelands DM,
  - City of Cape Town,
  - Western Cape Government required
- Behavior of Users, Operators
  - Poor discipline of some public transport drivers
  - Public transport operators without proper documentation
  - Intensive law enforcement required
  - Improved public transport safety and security

2.3.5 Drivers of Issues and Concerns

Amongst others, the following “drivers” of the above issues and concerns have been identified:

- The location of Stellenbosch between the N1 and N2 and the regional road network (road network generates regional through traffic).
- Role of the university, colleges, training institutions and schools in generating regional traffic.

- Impact of the location of the university, colleges and schools in peak period traffic congestion (e.g. schools located at major intersections along R44).
- Role of property values in Stellenbosch in generating regional traffic from surrounding towns such as Somerset-West, Strand, Kuilsrivier, Brackenfell and Durbanville (where ther are more affordable housing opportunities).
- Impact of the topography and travel distance on potential NMT.

2.4 SUSTAINABLE TRANSPORT

The concept of sustainable transport is becoming more prevalent within the world with strategies, frameworks and initiatives being developed. There has been a rapid growth in terms of the transport sector especially in developing countries and will continue to occur as long as the demand is still so high. Increased environmental awareness and the acknowledgement of the impacts of Climate Change is starting to materialise, and has resulted in the transport industry landscape starting to change as environmental concerns are becoming entrenched within operations.

It is clear from the scenario comparison presented in **Error! Reference source not found.**, that sustainable transport offers far more benefits. Although, 'sustainability' offers new challenges to planning approaches and integration, the benefits in the long term will be seen in the quality of the socio-economic and environmental conditions experienced.

Table 2-2: Business as usual compared to sustainable transport

Business as usual	Sustainable transport
High mobility & quantity	Accessibility & quality
Emphasizes one mode	Multi-modal
Lack of good connections between modes	Inter-modality
Accommodates & accepts trends	Interrupt & reverse harmful trends
Forecasted demand (predict & provide)	Work backward from preferred vision to planning & provision
Expands roads responding to travel demand	Manages transport or mobility demand
Ignores social & environmental costs	Incorporates "full" costs
"Silo" planning	Integrated planning

(Shiller, in CoT 2013)

Sustainable transport can be used to stimulate economic growth and improve mobility. The ultimate goal is to improve social equity, health and well-being; resilience of cities; urban-rural linkages and productivity of both urban and rural areas. One of the outcomes of the Rio+20 United Nations Conference on Sustainable Development is the importance of sustainable transport within developing countries.

Yet, measuring 'sustainability' is an extremely challenging task because of the complexity of this concept. The parameters of sustainability are not defined by neat thresholds and limits.

When asking questions about the limits of sustainability, the complexity of this task becomes clearer:

- For whom or what is sustainability achieved?
- How much can be regarded as sustainable?
- When should sustainability be achieved?
- For how long will this be sustainable?

With this challenge of complexity in mind, the UN and its global partners have invested in a number of strategies and forums in order to aid in the transition towards sustainable transport. South Africa too has placed much emphasis on planning for sustainable transport. In particular, the South African Cities Network has written a number of related papers on transit orientated development, sustainable transport and sustainable human settlements. Not to mention the CITP guidelines which specify the need for a sustainability framework, and the considerations necessary within any CITP.

The basic guiding principles for sustainable transport can be summarised as:

- ***Access*** - People are entitled to reasonable access to other people, places, goods and services
- ***Equity*** - The transportation community must strive to ensure social, inter-regional and inter-generational equity, meeting the basic transportation related needs of all people
- ***Health and Safety*** - Transportation systems should be designed and operated in a way that protects the health and safety of all people, and enhances the quality of life in communities
- ***Individual Responsibility*** - All individuals have a responsibility to act as stewards of the environment, undertaking to make sustainable choices with regards to personal movement and consumption
- ***Integrated Planning*** - Transport planning needs to take a more integrated approach to future planning
- ***Pollution Prevention*** - Transportation needs must be met without generating emissions that threaten public health, global climate, biological diversity or the integrity of essential ecological processes
- ***Land and Resource Use*** - Transportation systems must make efficient use of land and other natural resources while ensuring the preservation of vital habitats and other requirements for maintaining biodiversity
- ***Holistic Cost Accounting*** - Decision makers need to move towards cost accounting that reflects the total cost of social, economic and environmental aspects where commuters pay an appropriate share of costs

Partnerships and knowledge sharing is considered one of the most participatory and effective mechanisms to implement sustainable development and enhance international co-operation. The Plan of Implementation of the World Summit on Sustainable Development

(WSSD) (Johannesburg Plan of Implementation), Agenda 21 and/or the Programme for the Further Implementation of Agenda 21 is one such platform of partnerships under the umbrella of sustainable development.

Building on the outcomes of the Rio+20 and Agenda 21, the Environmentally Sustainable Transport (EST) initiative is just one example of such partnership. The EST aims to build a common understanding across the Asia-Pacific, Africa and Latin America and Caribbean on the essential elements of the EST. Through this initiative the Bangkok 2020 Declaration and Bogotá Declaration will be implemented with the hope of: achieving safe, reliable, affordable, efficient, people-centric and environment friendly transport system; fostering economic, social and environmental development; and, integrate developing countries in the world economy and contribute the eradication of poverty.

An Africa EST Forum is yet to be established. The objective will be to address the same for the African region through not only strengthened common understanding on the critical issues of concern and capacity gaps in the transport sector, but also a unique opportunity to discuss possible options and measures, and in particular how to realise a promising decade of sustainable transport through strategies and voluntary goals.

Until such time that an African EST forum has been established the declarations already established stand as guidance, and in particular the Bangkok 2020 Declaration: Sustainable Transport Goals for 2010-2020. This declaration is has adopted goals under the "**A**void-**S**hift-**I**mprove" paradigm of sustainable transport strategies:

- **AVOID unnecessary travel & reduce trip distances**: integrate land-use and transport planning, mixed-use development, support Information & Communication Technologies goals.
- **SHIFT towards more sustainable modes**: Non-motorised transport, improve public transport services, Transportation Demand Management, inter-city passenger & goods transport goals.
- **IMPROVE transport practices & technologies**: more sustainable Transport Fuels and Technology; standards for fuel quality, efficiency and emissions; periodic vehicle inspection and maintenance; adopt Intelligent Transport Systems; and improve freight transport efficiency goals.

It also incorporates consideration of cross-cutting strategies.

This suggests that a number of other strategies, guidelines and policies be adopted and integrated into the overall approach, such as: zero-fatality policy on safety; promotion of monitoring of Health Impacts; establish Air Quality and Noise standards; implement sustainable low-carbon transport initiatives to mitigate Global Climate Change and Energy Security; adopt Social Equity criteria; encourage innovative Financing Mechanisms; widespread distribution of Information and Awareness on sustainable transport; and develop dedicated and funded Institutions and promote good Governance goals.

These strategies are lengthy and detailed, and would be too cumbersome to include in this document. However, they should be consulted during the formation of the strategies so that they can be benchmarked against international experience and best practice.

2.5 STELLENBOSCH CITP VISION AND OBJECTIVES

Stellenbosch Local Municipality's vision for its transport system, for 2020 is:

> **"A sustainable transport system that provides for the basic mobility needs of individuals, supports a vibrant economy and operates seamlessly within and across the municipal boundaries"**

To ensure alignment of the municipal planning processes, the objectives of the CITP have been framed within context of the IDP goals[2].

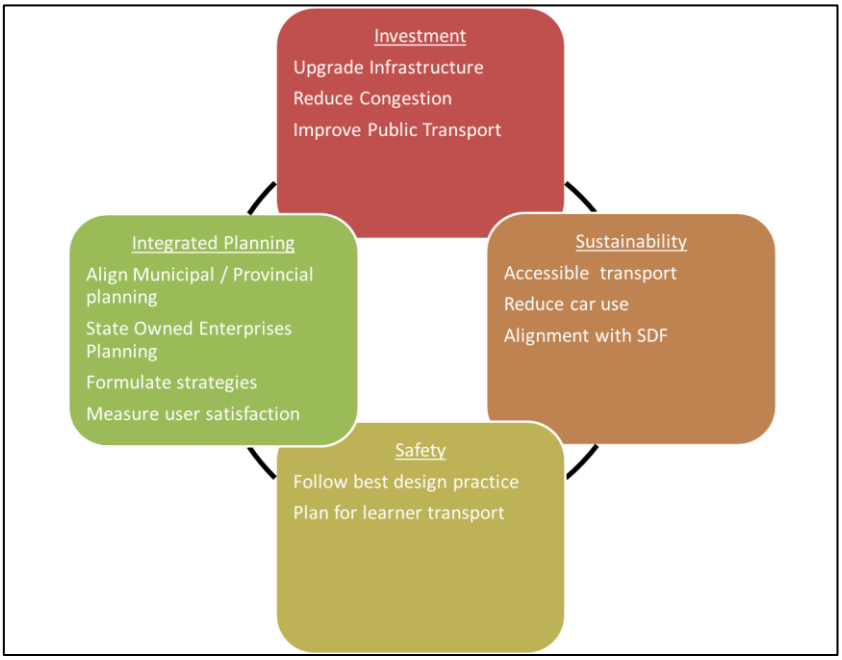
- Preferred Investment Destination:
  - Invest in the proposed plans arising from the TOD study, in particular upgrades to the stations
  - Accessibility of all modes of transportation, and synchronisation of infrastructure and services
  - Alleviation of the of traffic congestion along the R44
  - Increase and improve existing infrastructure to ensure that better public transport services can be provided to communities
- Dignified Living:
  - Equitable access and use for all
  - A transport system for those who influence or are affected by transport
  - Accessibility that provides for special needs users
  - Development of Region C, and not only Regions A and B
  - A transport system that provides a choice of modes to all.
- Safest Valley:
  - All relevant transport planning guidelines and best practice to be followed to ensure road user safety, e.g. NMT guidelines
  - Learner transport needs must be considered and planned for
  - Safe and secure public transport services
  - An efficient transportation system that does not compromise the safety of its users
- Greenest Municipality:
  - Incentivise modal shifts away from the use of private vehicles

[2] Please refer to section □: **Stellenbosch Local Municipality IDP** on page 4 for more detail on the Stellenbosch Local Municipality IDP 2015/16

  - Infrastructure that supports a modal shift, e.g. NMT and public transport focus
  - Infrastructure that supports and aligns with the spatial land use plan and sustainable development
  - Capitalise on the existing rail infrastructure to expand its capacity, linking and synchronising this with NMT, public transport and lastly individual cars
- Good Governance & Compliance:
  - Measure user satisfaction at the beginning and end of the CITP timeframe
  - Create a transport system that is affordable for the people and the municipality
  - Innovative planning that can be rolled out as incremental projects to accommodate budget constraints and planning processes
  - Develop a freight management policy
  - Stellenbosch University and the Local Municipality to formulate integrated and/or aligned transport strategies
  - Ensure Municipal – Provincial planning alignment and alignment with planning in the functional region.
  - Review policy, and make adjustments where necessary to support the CITP strategies

The above Objectives can be represented by the following figure.

Figure 2-6: CITP Vision and Objectives



2.6 KEY PERFORMANCE INDICATORS

In order to monitor the implementation of the CITP is is proposed to collect the appropriated data and to monitor the achievement of Key Performance Indicators on an annual basis. The CITP goals and objectives and the revelant Key Performance Indicators are shown in Table 2-3.

Table 2-3: Key Performance Indicators for the CITP

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
Preferred Investment Destination	Invest in the proposed plans arising from the TOD study, in particular upgrades to the stations	Number of project plans completed for TOD related projects	A project is defined as a specific design, tender documents for the provision of TOD related infrastructure.	PRASA, Stellenbosch Municipality	PRASA, Stellenbosch Municipality, WCG
	Accessibility of all modes of transportation, and synchronisation of infrastructure and services to contribute to the ease of doing business and accessing work and educational opportunities.	Passanger-Km of new public transport services introduced or number of NMT related projects completed- this should be linked to the Rand Value increase in business transactions or increase in Regional Gross Domestic Product.	A public transport service is defined as a scheduled service operating on a defined route. A NMT project is defined as a dedicated cycle track or pedestrian path with the appropriate infrastructure and signage.	Stellenbosch Municipality and Municipal Economic Review Outlook from Department of Treasury.	Stellenbosch Municipality
	Alleviation of the of traffic congestion along the R44	% reduction in traffic volumes or change in volume / capacity ratio on key transport routes	Traffic volume is represented by passenger car units	Traffic counts conducted by the Municipality	Western Cape Government, Stellenbosch Municipality
	Increase and improve existing infrastructure to ensure that better public transport services can be provided to communities	Number and value of public transport related infrastructure projects implemented	A project is defined as a shelter, rank, terminal etc. relation to the provision of public transport services	Stellenbosch Municipality	Stellenbosch Municipality

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
Dignified Living	Equitable access and use for all contributing to liveable streets.	Number of public transport passengers, number of pedestrians and cyclists.	A public transport passenger, pedestrian or cyclist is defined as those utilising new facilities and services implemented as a part of the CITP programme	Surveys and traffic counts conducted by the Municipality	Stellenbosch Municipality
	A transport system for those who influence or are affected by transport	Number of public transport passengers, number of pedestrians and cyclists.	A public transport passenger, pedestrian or cyclist is defined as those utilising new facilities and services implemented as a part of the CITP programme	Surveys and traffic counts conducted by the Municipality	Stellenbosch Municipality
	Accessibility that provides for special needs users	Number of special needs users utilising public transport services	A public transport service is defined as a scheduled service operating on a defined route	Surveys conducted by the Municipality	Stellenbosch Municipality
	Development of Region C, and not only Regions A and B	Number or km of transport projects implemented in the rural parts of Stellenbosch Municipality	A transport project is defined as a road, public transport amenity, traffic control of signage etc.	Stellenbosch Municipality	Stellenbosch Municipality
	A transport system that provides a choice of modes to all.	Number of public transport services provided to main	A public transport service is defined as a scheduled service	Stellenbosch Municipality	Stellenbosch Municipality

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
		destinations	operating on a defined route		
Safest Valley	All relevant transport planning guidelines and best practice to be followed to ensure road user safety, e.g. NMT guidelines	Number of interventions or projects implemented to improve traffic safety	A traffic safety project is one that addresses the cause of accidents or potential accidents by e.g. improving sight distance, provision of pedestrian crossings, geometric improvements at intersections etc.	Stellenbosch Municipality	Stellenbosch Municipality
	Learner transport needs must be considered and planned for	Number of Learners transported by new public transport services to places of educaton	A public transport service is defined as a scheduled service operating on a defined route	Stellenbosch Municipality	Stellenbosch Municipality
	Safe and secure public transport services	% reduction in accidents or incidences of crime on public transport vehicles or at facilities	A public transport service is defined as a scheduled service operating on a defined route	Stellenbosch Municipality	Stellenbosch Municipality
	An efficient transportation system that does not compromise the safety of its users	% reduction in accidents or incidences of crime on public transport vehicle or at facilities	A public transport service is defined as a scheduled service operating on a defined route	Stellenbosch Municipality, safety and security statistics	Stellenbosch Municipality

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
Greenest Municipality	Incentivise modal shifts away from the use of private vehicles as part of a Green Transport Plan for all buildings.	% increase in the use of public transport services	A public transport service is defined as a scheduled service operating on a defined route	Stellenbosch Municipality, surveys of public transport usage	Stellenbosch Municipality
	Infrastructure that supports a modal shift, e.g. NMT and public transport focus	Number and value of public transport, NMT cycle lanes and related infrastructure projects implemented	A project is defined as a shelter, rank, terminal, cycle lane, cycle parking, sidewalk, and. Related facilities	Stellenbosch Municipality	Stellenbosch Municipality
	Infrastructure that supports and aligns with the spatial land use plan and sustainable development	Km of public transport routes operational, km of NMT and cycle facilities implemented.	A public transport route is one on which a scheduled public transport service is operational. NMT and cycle facilities are lanes, parking, crossings etc.	Stellenbosch Municipality	Stellenbosch Municipality
	Capitalise on the existing rail infrastructure to expand its capacity, linking and synchronising this with NMT, public transport and lastly individual cars	% increase in passenger numbers using rail services	Number of rail passengers	PRASA, Surveys by Stellenbosch Municipaity	PRASA, Stellenbosch Municipality

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
Good Governance & Compliance	Measure user satisfaction at the beginning and end of the CITP timeframe	% of users satisfied with the quality and level of service offered by the private and public transport system	A user is defined as a person that makes use of the transport system	Stellenbosch Municipality	Stellenbosch Municipality
	Create a transport system that is affordable for the people and the municipality	% of users satisfied with the affordability of the private and public transport system	A user is defined as a person that makes use of the transport system	Stellenbosch Municipality	Stellenbosch Municipality
	Innovative planning that can be rolled out as incremental projects to accommodate budget constraints and planning processes	No of projects planned that can be classed as “innovative”.	An innovative project is one that seeks to make improvements notwithstanding budget and logistical constraints	Stellenbosch Municipality	Stellenbosch Municipality
	Develop a Freight Management Policy	Completion of a Freight Management Policy for Stellenbosch	Freight Management Policy approved by the Stellenbosch Municipality	Stellenbosch Municipality	Stellenbosch Municipality
	Stellenbosch University and the Local Municipality to formulate integrated and/or aligned transport strategies	Number of transport strategies of plans prepared jointly by the Stellenbosch Municipality and the University of Stellenbosch	A transport plan or strategy is one that addresses common transport problems identified by the Stellenbosch Municipality and the University of	Stellenbosch Municipality, University of Stellenbosch	Stellenbosch Municipality

IDP Goal	Objective	KPA	Unit	Data Source	Responsible Agency
			Stellenbosch		
	Ensure Municipal – Provincial planning alignment and alignment with planning in the functional region.	Number of joint meetings of planning forums attended	Meetings or forums include statutory bodies established by the WCG, TCT etc. and more informal meetings convened to address common problems in the functional region.	Stellenbosch Municipality	Stellenbosch Municipality
	Review policy, and make adjustments where necessary to support the CITP strategies.	Number of policy documents produced	A policy document or strategy is one that has been identified in the CITP e.g. CBD Parking Policy or one that can support the CITP e.g Spatial Framework	Stellenbosch Municipality	Stellenbosch Municipality
	Establishment of MOAs and Business Process together with state organs and private sector to encourage sustainable transport management	Improved turn-around time to deal with transport related applications	A transport application can apply to all modes, systems, operations and infrastructure relate to transport	Stellenbosch Municipality	Relevant Stakeholders

3. TRANSPORT REGISTER

SYNOPSIS:

- The Transport Register of the CITP provides an overview of the status of the transport system and identifies trends and changes in the demographics of the area to which the transport system must adapt.
- The Transport Register assists in identifying shortcomings in the transport system and areas where improvement is needed.
- Information on the following aspects of the transport system is provided:
  - Utilisation of public transport services and facilities
  - The status and condition of public transport facilities and infrastructure
  - The percentage utilisation of the various modes of transport
  - The status and condition of the road network
  - Freight transport information
  - Financial information
- Synopsis of the Stellenbosch transport system:
  - Total Population of Stellenbosch: 155 733
  - Public Transport (Rail):
    - Railway Line: 18km
    - Seven Stations
    - Minimum / maximum boarding / alighting: 1 000 – 7 500 pax
    - Trains per Peak Hour: 2
    - Line capacity utilization: < 50%
  - Public Transport (Bus):
    - Route operated: 1 (Stellenbosch – Strand)
    - Service operated: 1 return trip per week-day
  - Public Transport (Minibus Taxi):
    - Routes operated: 43
    - Vehicle Trips per Peak Hour: 104
    - No Vehicles: 114 (Surveyed)
    - No. Operating Licences Issued: 157

SYNOPSIS:

- Public Transport (Long Distance Bus):
  - Routes operated: 9
  - No. Operators: 3
- Modal Split:
  - Light Vehicles: 87%
  - Minibus Taxi: 7.5%
  - Bus: 4.5%
  - Heavy Vehicles: 1.5%
- Roads and Traffic:
  - Road Length: Municipal Road Network: 309 km
    - 303.3 km Butumen Paved Roads
    - 5.7 km Block Paved Roads
  - 37 m Concrete Paved Roads
- Road Condition:
  - Road Surfacing:
    - Very Good – 31%
    - Good – 26%
    - Fair – 25%
    - Poor – 15%
    - Very Poor – 4%
  - Structural Condition:
    - Very Good – 51%
    - Good – 32%
    - Fair – 5%
    - Poor – 9%
  - Very Poor – 4%
- Congested Main Roads:
  - The R304 before its intersection with the R44
  - The R44 south between Paradyskloof and the van Reede intersection

SYNOPSIS:

- Bird Street between the R44 and Du Toit Street
- Merriman and Cluver Streets between Bird Street and Helshoogte Road
- Dorp Street between the R44 and Piet Retief Street
- Adam Tas Road between its junction with the R44 an Merriman Street
- Piet Retief Street
- Van Reede and Vrede Streets between the R44 and Piet Retief Street

3.1 PURPOSE OF THE TRANSPORT REGISTER

The Transport Register provides a detailed overview of the current land transport system and its operations in the Stellenbosch municipal area and reflects the demographics of the area, the status quo of the transport system, system management, performance levels and the status and condition of transport facilities.

From the information provided, the dimensions of the transport system can be understood as well as the ability of the transport system to provide effective and efficient transport services and infrastructure to meet the needs of the community and for economic growth to occur in the Stellenbosch municipal area. The Transport Register also assists in identifying shortcomings and areas where improvement is needed. Thus strengths, weaknesses and opportunities can be identified.

The Transport Register provides information on the demographic and socio-economic makeup of the population within the municipal area and identifies trends and changes to which the transport system must adapt.

A general overview of the land transport system is provided, indicating the current modal share between the transport modes used in the area. A description is provided of the current public transport system, establishing the demand and supply for public transport services. Conclusions are then drawn as to the degree to which supply meets demand and in which areas improvements are needed. The organisational structure of the public transport industry is also described. Details of other transport services, such as non-motorised transport and long distance transport services are provided.

An overview of the condition of the road infrastructure and levels of congestion experienced is provided followed by a description of the freight transport in the municipal area. This chapter concludes with a description of the various sources of funding and expenditure on transport services and infrastructure in the past financial year.

3.2 DEMOGRAPHIC AND SOCIO-ECONOMIC OVERVIEW

The Stellenbosch Municipal Region is comprised of the towns of Stellenbosch, Franschhoek, Pniel, and Klapmuts. The Region covers a total area of 831 km^2 (83 100 ha.). According to the 2011 National Household Census, the Stellenbosch Municipality had a total population of 155 733 people which indicates a population growth rate of 2.71% since the 2001 Census (118 709). The region has an average population density of 187 persons per square kilometre. Of the total population, 49% are male and 51% are female, congruent to the gender split for the Western Cape Province.

3.2.1 Demographic Information

Error! Reference source not found. lists the demographic profile of the Stellenbosch Municipality in comparison to that of the Western Cape Province and the rest of South Africa. The population of the Stellenbosch Municipality accounts for 3% of the total population in the Western Cape Province. Of the total population in the Municipal area, Coloureds make up the highest proportion at 52.2%, followed by Black Africans (28.1%) and Whites (18.5%). Indian/Asians make up 0.4% of the population whilst other population groups account for 0.8%. The population distribution by group is illustrated in **Error! Reference source not found.**.

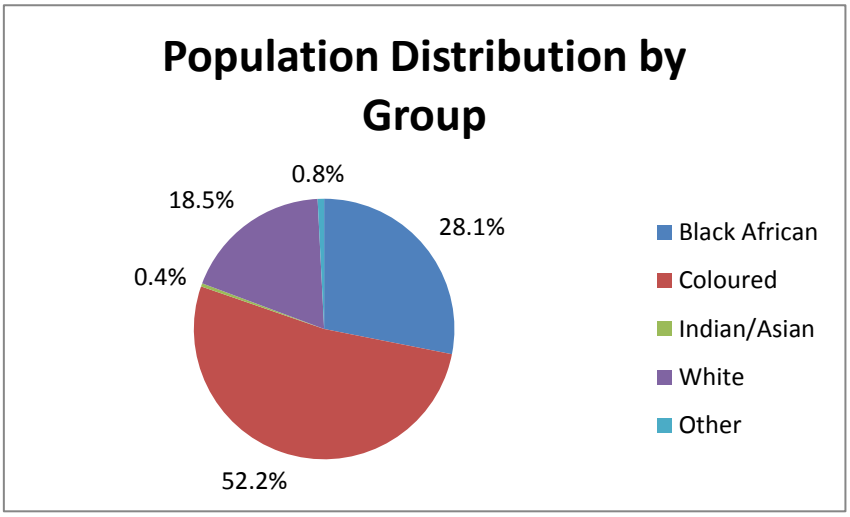
Table 3-1: Salient Demographic Features

Salient Demographic Features		Stellenbosch Municipality % for Municipality	Western Cape Province % for Province	South Africa % for Country
Total Population (number)		155 733	5 800 000	51 770 560
Total Population (percentage)		3%	100%	-
Population by Group	Black African	28.1%	32.9%	79.2%
	Coloured	52.2%	48.8%	8.9%
	Indian/Asian	0.4%	1.0%	8.9%
	White	18.5%	15.7%	2.5%
	Other	0.8%	1.6%	0.5%
	Total	100.0%	100.0%	100.0%

Salient Demographic Features		Stellenbosch Municipality % for Municipality	Western Cape Province % for Province	South Africa % for Country
Population by Age	0-4	8.6%	9%	10%
	5-9	7.2%	9%	11%
	10-14	7.0%	9%	11%
	15-19	9.9%	10%	11%
	20-24	14.8%	10%	10%
	25-64	47.3%	50%	44%
	65+	4.9%	3%	3%
Highest Education Level	No Schooling	2.4%	8%	16%
	Some Primary	31.0%	26%	30%
	Completed Primary	5.4%	8%	7%
	Some Secondary	27.5%	33%	28%
	Grade 12	17.1%	18%	14%
	Higher	6.0%	8%	5%
Gender	Male: Female (ratio)	49 : 51	49 : 51	48 : 52

Source: Statistics South Africa, 2011

Figure 3-1: Population Distribution by Group

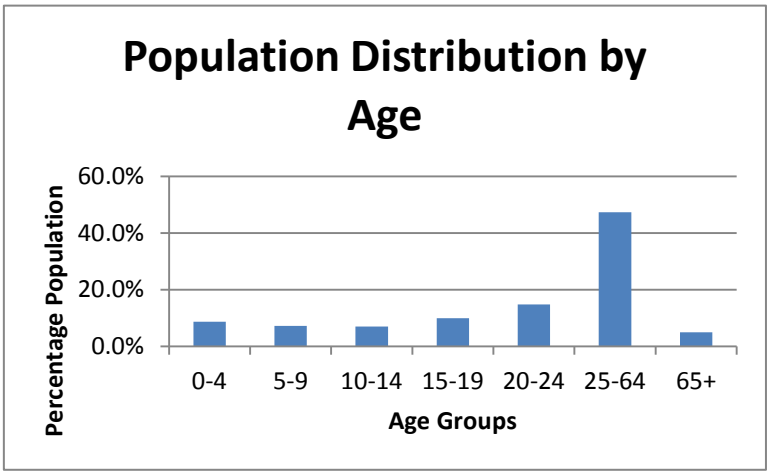


Source: Statistics South Africa, 2011

Error! Reference source not found. indicates that nearly half the population of the Stellenbosch Municipal area are between the ages of 25 and 64 (47.3%). The retired

population constitutes 4.9% of the population which is significantly higher than that of the Western Cape Province and South Africa (3%). It is assumed that most tertiary education students fall into the age bracket 20 to 24 which accounts for 14.8% and the teenage group (15-19) accounts for 9.9%. The student portion of the Municipal population is quite significant therefore presenting a unique opportunity to influence their travel patterns and choices as they are still impressionable and able to use NMT modes due to good health and fitness compared to older citizens.

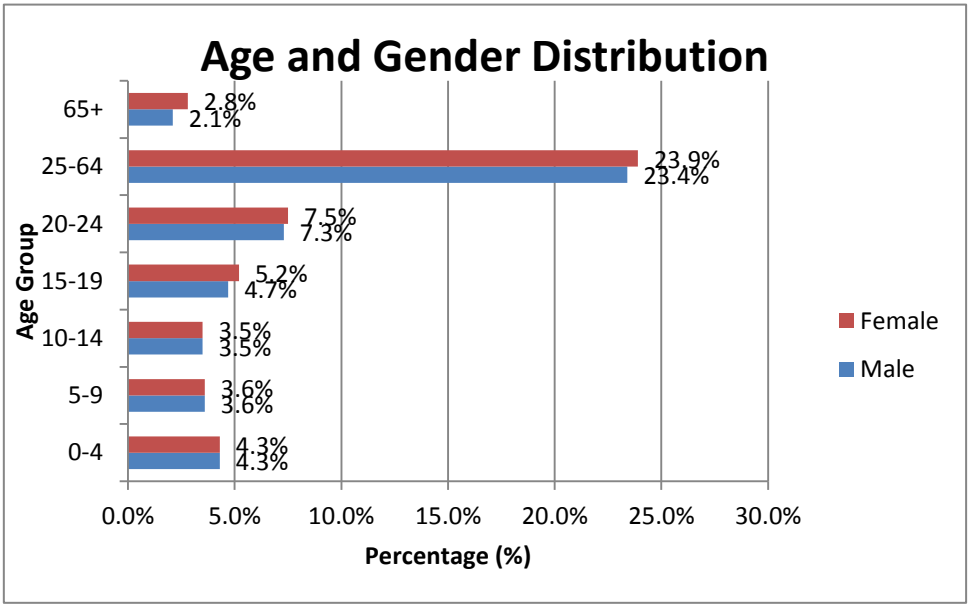
Figure 3-2: Population Distribution by Age



Source: Statistics South Africa, 2011

Error! Reference source not found. provides a further illustration of the age and gender distribution in the Municipality indicating that the gender split is relatively even across all age groups.

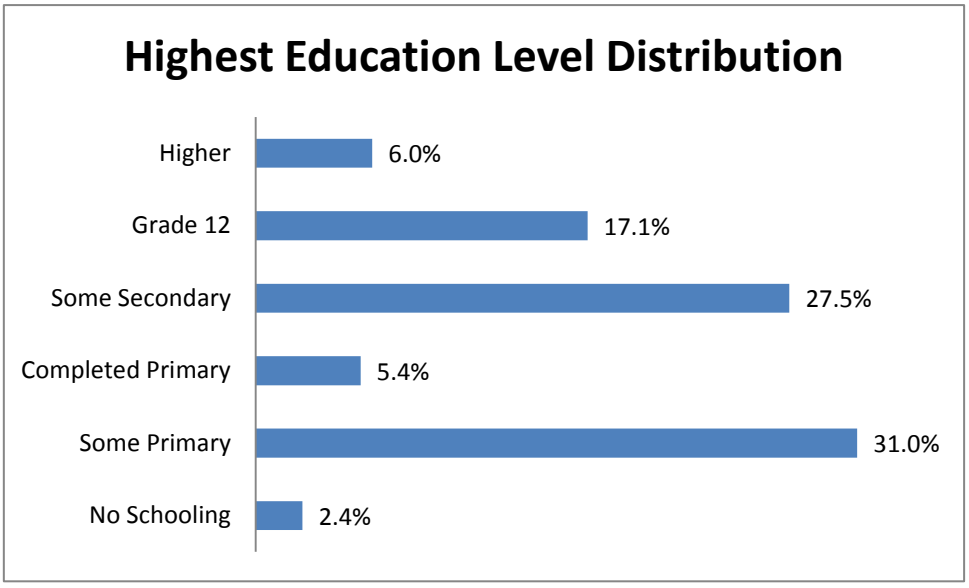
Figure 3-3: Age and Gender Distribution



Source: Statistics South Africa, 2011

Error! Reference source not found. shows the distribution of the highest education level achieved by the population of the Stellenbosch Municipality. As can be seen, only 6% have received tertiary education and 17.1% have completed Grade 12; therefore 76.9% of the population in the Municipal area have not completed schooling of which 2.4% have not received schooling at all. Statistics South Africa reports that within the Stellenbosch Municipal area, 6.2% of those above the age of 20 have completed primary school, 35% have some secondary schooling, 25.2% have completed matric, 17.3% have received some form of higher education and 3.1% have not received any form of schooling.

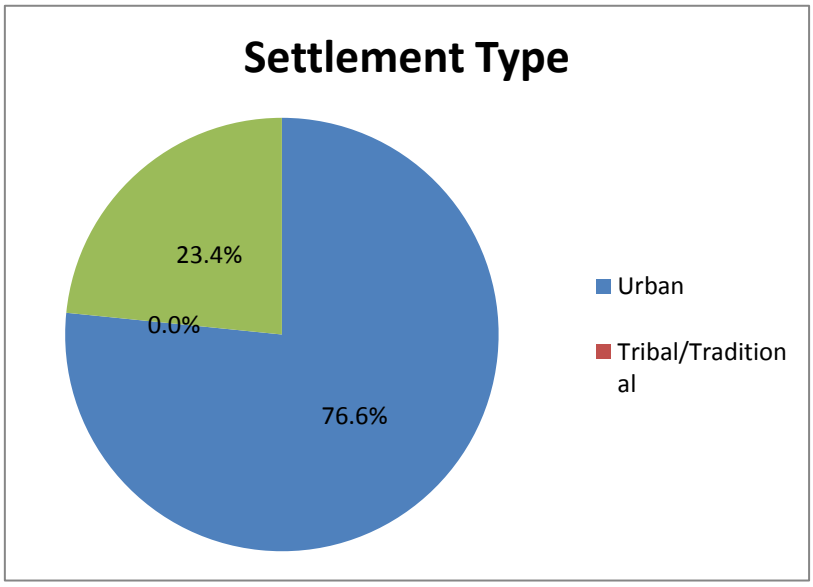
Figure 3-4: Highest Education Level Distribution



Source: Statistics South Africa, 2011

The Stellenbosch Municipal area has 43 420 households with an average household size of 3.3 persons per household. There are primarily two types of settlements in the Stellenbosch Municipality; namely urban (76.6%) and farm (23.4%) with tribal/traditional accounting for a minimal proportion of the Region (0.0%). **Error! Reference source not found.** depicts these statistics.

Figure 3-5: Settlement Types

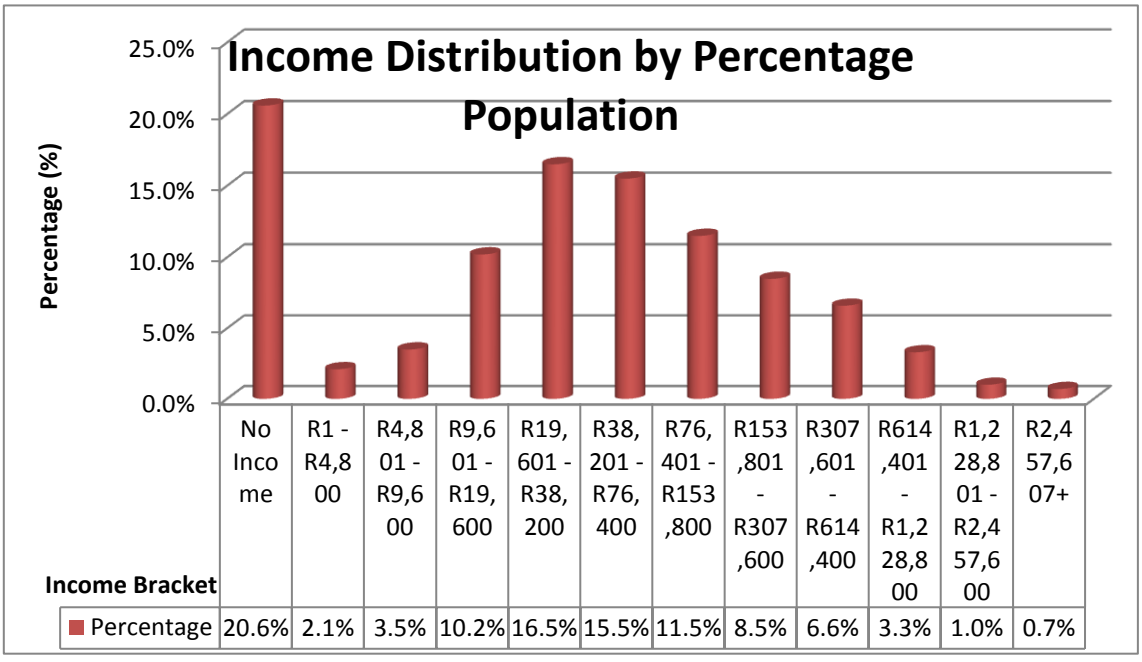


Source: Statistics South Africa, 2011

3.2.2 Socio-Economic Information

One fifth of the Municipality's population has no source of income (20.6%). The average income for the area falls in the income bracket R19 601- R38 200 and is clustered in the bracket between R19 601 and R153 800 which is quite a large range between the lower and higher end. This is illustrated in **Error! Reference source not found.**.

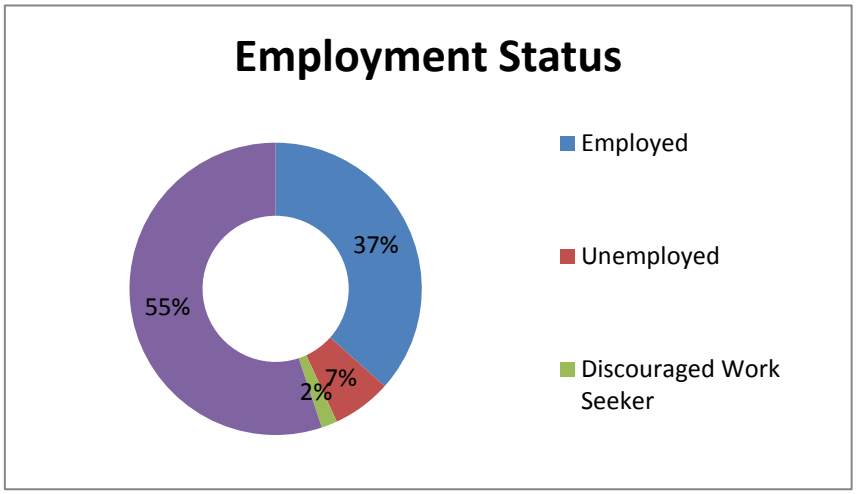
Figure 3-6: Income Distribution by Percentage Population



Source: Statistics South Africa, 2011

Error! Reference source not found. illustrates the employment status for the Stellenbosch Municipality from which it can be seen that just over half the population are not economically active (55%) and 7% are unemployed whilst 2% are discouraged work seekers. Approximately one third of the population are currently employed (37%) compared to the Western Cape Province which as 74% of its population as employed; therefore it is exactly half compared to the Province.

Figure 3-7: Employment Status

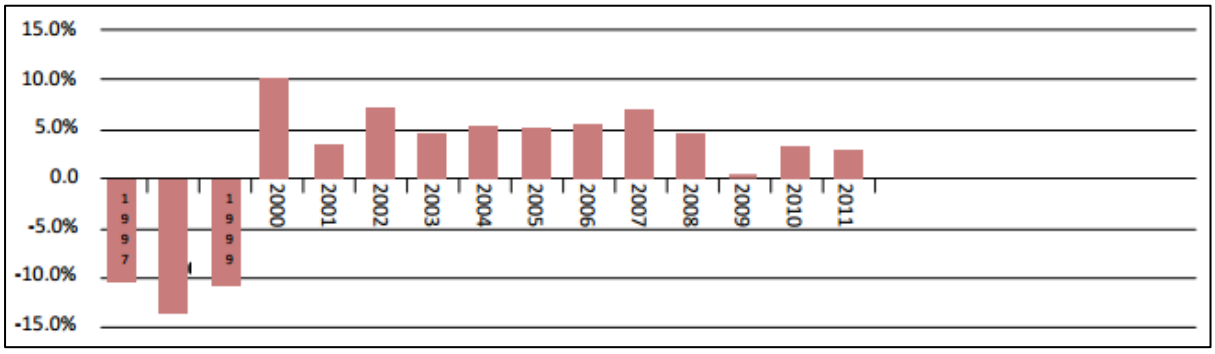


Source: Statistics South Africa, 2011

3.2.3 Economic Information

Error! Reference source not found. and **Error! Reference source not found.** were taken from the 2015/16 Stellenbosch Integrated Development Plan. **Error! Reference source not found.** illustrates the GDP growth rates for the Stellenbosch Municipality over a period of 14 years from which it can be seen how the global recession in 2008 caused a drastic decline in the GDP growth rates for 2009 (0.3%). However; higher growth rates are seen for the years 2010 and 2011 indicating some economic recovery for the region. This region performed slightly better in 2009 compared to national statistics which show a GDP growth rate of -2%. Similarly, the national GDP growth rate also indicated recovery in the years 2010 and 2011 with an average GDP growth rate of 3.5% for these two years.

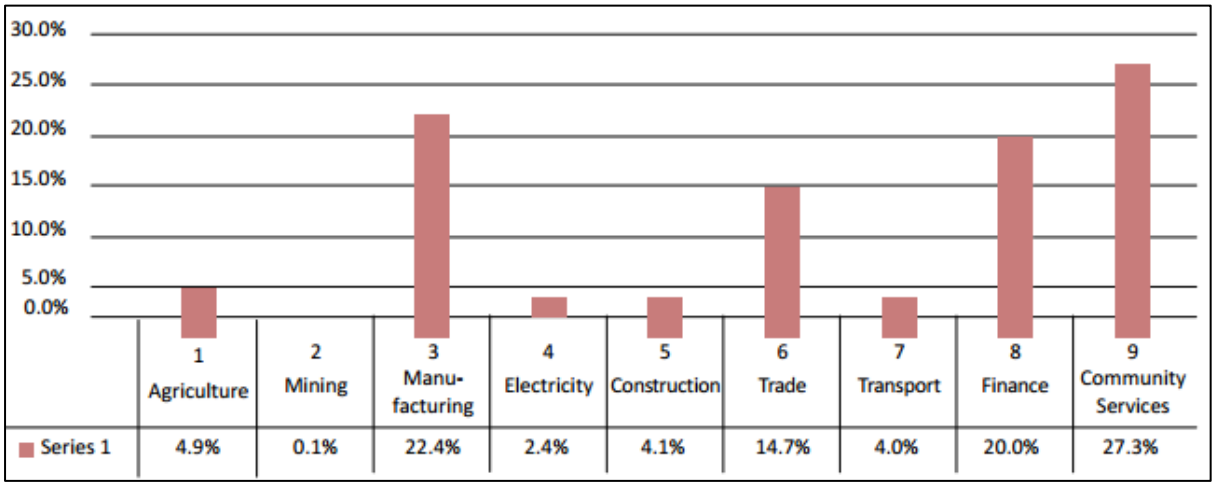
Figure 3-8: Stellenbosch GDP-R Growth



Source: Stellenbosch IDP, 2014

Error! Reference source not found. illustrates that there are a range of economic activities which take place in the Stellenbosch Municipal area. Community Services (27.3%), Finance (20.0%), Trade (14.7%) and Manufacturing (22.4%) are the main contributors to the areas GDP.

Figure 3-9: Economic Profile, Stellenbosch LM 2011



Source: Stellenbosch IDP, 2014

3.2.4 Conclusions

The demographic and socio-economic data indicates that there is a moderate population growth rate in Stellenbosch of 2.7% while only 37% of the population are employed – half of the provincial average. There is however a large percentage of 7.5% of the population that are within the 20 to 24 age group i.e. students that contributes to this. Although the student population does contribute to the economy in other ways, there is economic pressure on the portion of the population contributing to GDP and the rates base of the Municipality. This results in a limit on the amount of available financial resources to invest in the transport system.

3.3 GENERAL OVERVIEW OF THE TRANSPORTATION SYSTEM

Stellenbosch Municipality currently has a well-developed transport system that links the towns within the municipal area to the rest of the Western Cape. Within the municipal area the public transport system comprises minibus taxi, metered taxi, bus and passenger rail services. The bus and passenger rail services are scheduled whereas the minibus taxi services are considered to be “on demand” services. The minibus taxi services are mainly focused within the municipal area with minimal operating routes and licenses issued for inter municipal movement (i.e. between Stellenbosch Municipality, and the City of Cape Town.

Data collection surveys were conducted in June 2015 in order to update the CPTR and inform the OLS. A summary of the data analysis can be found in the subsequent sections.

3.4 DESCRIPTION OF THE PUBLIC TRANSPORT SYSTEM

3.4.1 Passenger Rail

Within the Western Cape there is an extensive rail network providing linkages between various part of the Province, as well as rail lines that extend beyond the Province. This rail network facilitates the movement of both passengers and freight.

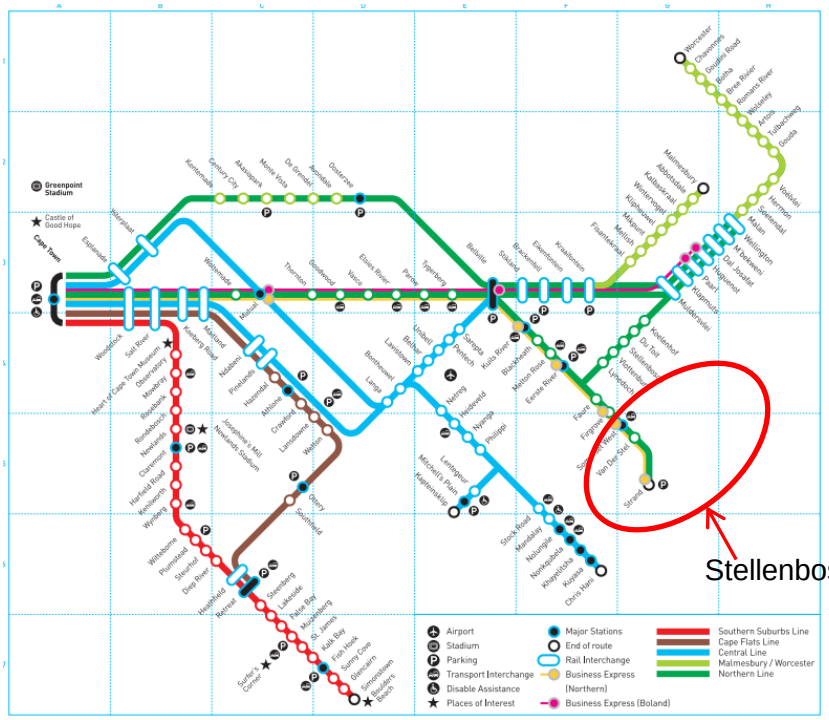
The current operator of the passenger rail network is Metrorail, a member of PRASA, which provides a scheduled service. Metrorail currently provides a passenger rail service to a number of areas within the Stellenbosch Municipal area via its northern line. The northern line extends from Cape Town via Monte Vista to Bellville, Wellington, Strand and Stellenbosch as illustrated in **Error! Reference source not found.**. There are seven railway stations which fall within the Stellenbosch Municipal area; namely:

- Klapmuts
- Muldersvlei
- Koelenhof
- Du Toit
- Stellenbosch
- Vlottenburg
- Lynedoch

The total length of railway line falling within the Municipal area is approximately 18km.

Maintenance and minor works have been conducted in the past year at Lynedoch, Koelenhof and Klapmuts Stations. Further maintenance and minor works are planned for Vlottenburg, Stellenbosch, Du Toit and Muldersvlei Stations. These works pertain to the refurbishment of ticket offices and waiting areas, access control, station control, toilets, shelters, station lighting and security aspects and staff facilities. The present stations will therefore continue to operate at their current capacities as no major upgrades are planned for the above station.

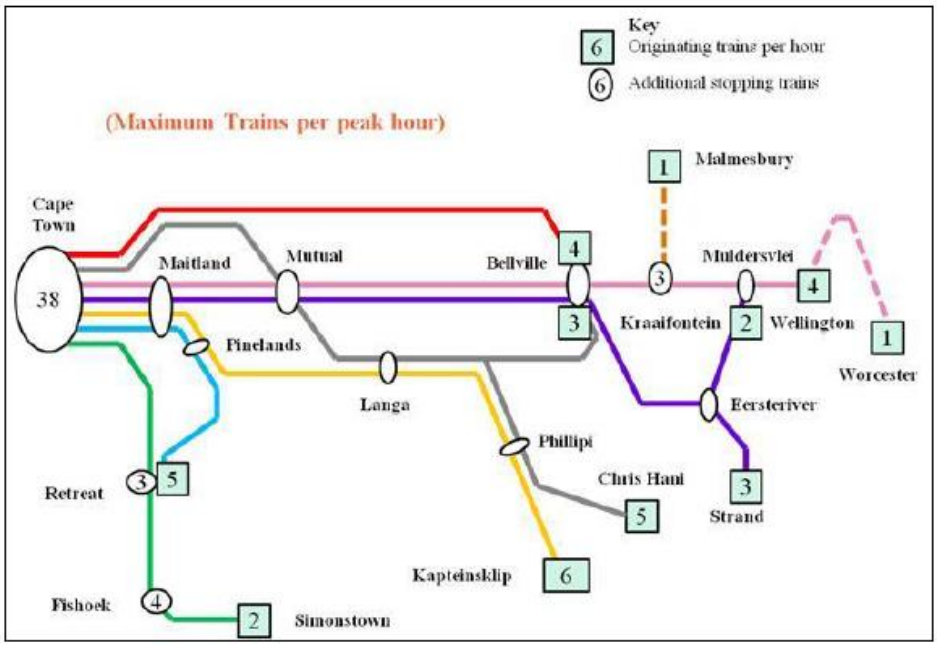
Figure 3-10: Metrorail Route Map



Source: Metrorail, 2015

Error! Reference source not found. illustrates a summary of the peak hour services for each railway line in the Western Cape. The service to Stellenbosch comprises two trains per peak hour originating from the northern line through the Stellenbosch Municipal area.

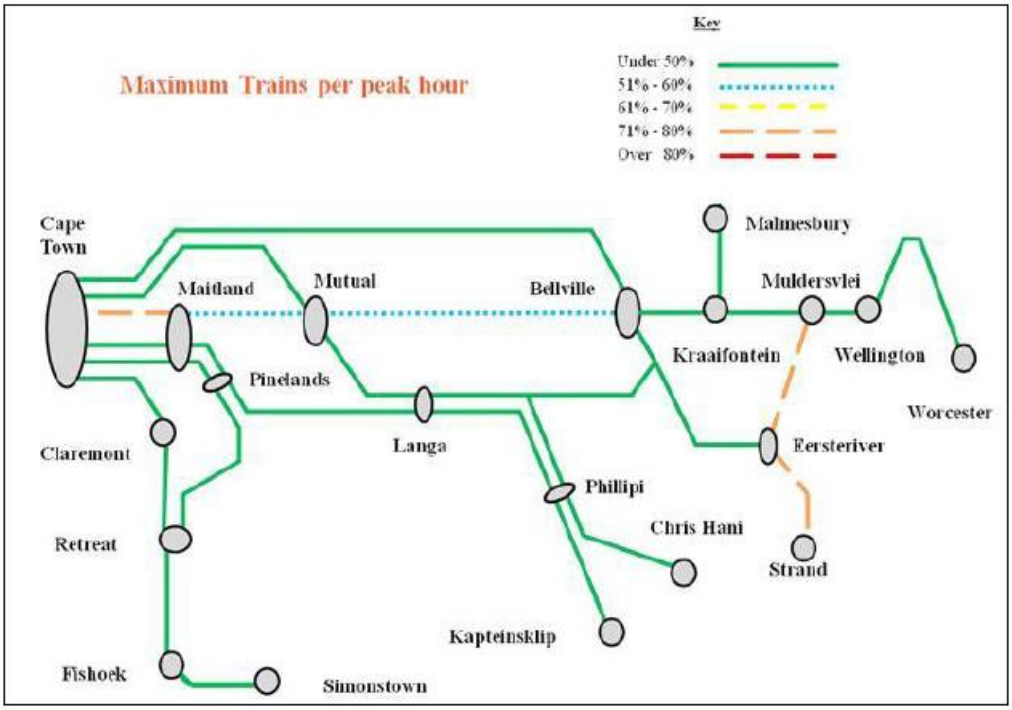
Figure 3-11: Summary of Current Peak Hour Services



Source: Prasa, 2012

Error! Reference source not found. illustrates the percentage utilisation of the passenger rail network capacity in the busiest hour according to the 2012 timetable. The northern line operating through the Stellenbosch Municipal area is highlighted in the figure in orange for the single-track section running through Lynedoch, Vlottenburg, Stellenbosch, Du Toit and Koelenhof stations indicating a 71% to 80% utilisation. The line running through Muldersvlei and Klapmuts stations is highlighted in green indicating an utilisation rate which is below 50%.

Figure 3-12: Current Passenger Rail Network Capacity Utilization during the Peak Hour



Source: Prasa, 2012

The latest statistics available on rail is from a rail census conducted in 2012. The resulting report illustrates the operations and passenger volumes at the various stations and therefore on the intermediate lines. The results of the rail census within the Stellenbosch municipal area are indicated in **Error! Reference source not found.**.

Table 3-2: Rail Census results3 for Stellenbosch Municipality

Station	Boarding		Alighting		Total		% Diff. on Total
	2007	2012	2007	2012	2007	2012	
Klapmuts	1692	1468	1646	1426	3338	2894	-13.3%
Muldersvlei	3919	3713	3213	3722	7132	7435	4.2%
Koelenhof	651	686	576	614	1227	1300	5.9%
Du Toit	2808	2863	2589	2695	5397	5558	3.0%
Stellenbosch	2209	2471	2553	2286	4762	4757	-0.1%
Vlottenburg	448	482	505	544	953	1026	7.7%
Lynedoch	653	624	793	811	1446	1435	-0.8%

Source: Rail Census, 2012

Error! Reference source not found. indicates that there has been a marginal change in the number of people boarding at the various stations within the Stellenbosch Municipal area for 2007 and 2012. Similarly in the case of alighting passengers, with the exception of Muldervlei, which has an increase in alightings of approximately 500 persons (15%), there has been a minimal change in alightings for 2007 and 2012. There has been an overall increase of boardings and alightings of 6.6 percent from 2007 to 2012.

Between 2007 and 2012, the total number of scheduled trains declined. For the Cape Town to Wellington line, the total number of scheduled trains decrease by 7 (approximately a 7% decrease). A reduction in the frequency of scheduled trains may have led to the decline in passenger volumes assuming all other things remain constant, as is the case with Klapmuts. However, there has been an increase in development activity around the other stations within the Stellenbosch municipality that may have led to an increase in the passenger volume to those stations.

According to the 2012 rail census the passenger rail service lines of Muldersvlei to Cape Town via Stellenbosch and Woodstock and Worcester to Cape Town via Wellington and Monte Vista had 1 train set consisting of 4-metro Plus and 4-metro coaches (5M2A train type). The capacity of the train set is approximately 557 persons standing and 212 persons seated. The passenger capacity during the 06:00 – 07:00 peak hour is approximately 2 228 persons standing and 848 seated (i.e. a total of 3 076 persons in the peak hour in both directions). The service operates once in the morning peak hour.

All the railway stations, with the exception of Lynedoch, fall within the 41 – 135 km zone with a fare rate range of between R12 (MetroPlus) for a single ticket and R471 (Metro) for a

[3] This table illustrates 24 hour results

monthly ticket. The current[4] fares for the rail stations within the Municipal area are shown in **Error! Reference source not found.**.

Table 3-3: 2015 Passenger Rail Fares

Station	km Zone	Single		Week		Month	
		Metro Plus	Metro	Metro Plus	Metro	Metro Plus	Metro
Lynedoch	30/40	R15.50	R 9.50	R 127	R 61	R 394	R 184
Vlottenburg	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239
Stellenbosch	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239
Du Toit	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239
Koelenhof	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239
Muldersvlei	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239
Klapmuts	41 - 135	R 18.50	R 12	R 152	R78	R 471	R 239

Source: Metrorail, 2015

3.4.2 Bus

Golden Arrow Bus Service:

As of January 2015 a new bus route operated by Golden Arrow Bus Service (GABS) was introduced which transports commuters between Stellenbosch, Somerset West and Strand from Mondays to Fridays. This route operates twice a day, starting in Strand at 06:30 and ending in Stellenbosch at 07:30, and starting in Stellenbosch at 16:50 and ending in Strand at 17:40 again. No services are operated on Saturdays and Sundays. **Error! Reference source not found.** shows the pick-up points along the route.

The route description is as follows:

- Depart from Strand turn onto Beach Rd and drive east, enter roundabout traffic circle, take the 1st exit, northeast, opposite Southey's Vines, pass Lord Charles Hotel, Broadway Blvd. (R44) towards Stellenbosch, Adam Tas Str, Merriman Str. and drive east (pass University of Stellenbosch), enter roundabout traffic circle, take the 1st exit northeast to Super Spar on cnr. of Helshoogte Str.

[4] This table is based on 2015 Metrorail Fare Structure

Figure 3-13: GABS Route Description

06h30 STRAND
06h45 SOMERSET WEST SAP
Via LORD CHARLES HOTEL
Via HELDERBERG VILLAGE
Via SOMERBOSCH NURSERY
Via TECHNO PARK
Via PARMALAT
Via SIMONSBERG HOSTEL
07h30 STELLENBOSCH

Source: Golden Arrow Bus Services, 2015

Error! Reference source not found. shows a GABS bus holding in an embayment for buses on Merriman Avenue at the Bergzight public transport facility.

Figure 3-14: GABS Bus Holding Area at Bergzight Public Transport Facility on Merriman Avenue

3.4.3 Minibus Taxi

Minibus Taxi services are provided by licenced 15 seater vehicles operating from formal and informal facilities in the Stellenbosch Municipal area. The vehicles currently utilised do not meet the required standards for universal accessibility and therefore disabled persons cannot be accommodated. Although the services offered are licenced to operate on specific routes, the services are unscheduled and there is no formal method of fare collection.

Surveys have shown that there is a high proportion of unlicensed minibuses operating on routes in Stellenbosch. These vehicles may in fact provide needed service capacity and should be formalised through the Operating Licence application process, but in many cases it leads to an oversupply of transport, destructive competition which renders licenced operations uneconomical and the over utilisation of ranking facilities. Although the Stellenbosch Municipality applies the necessary enforcement procedures, the existing impoundment facilities are inadequate to accommodate vehicles that are taken out of service.

Error! Reference source not found. provides a summary of the minibus taxi routes which operate in the Stellenbosch Municipal area.

Table 3-4: Minibus Taxi Routes and Numbers

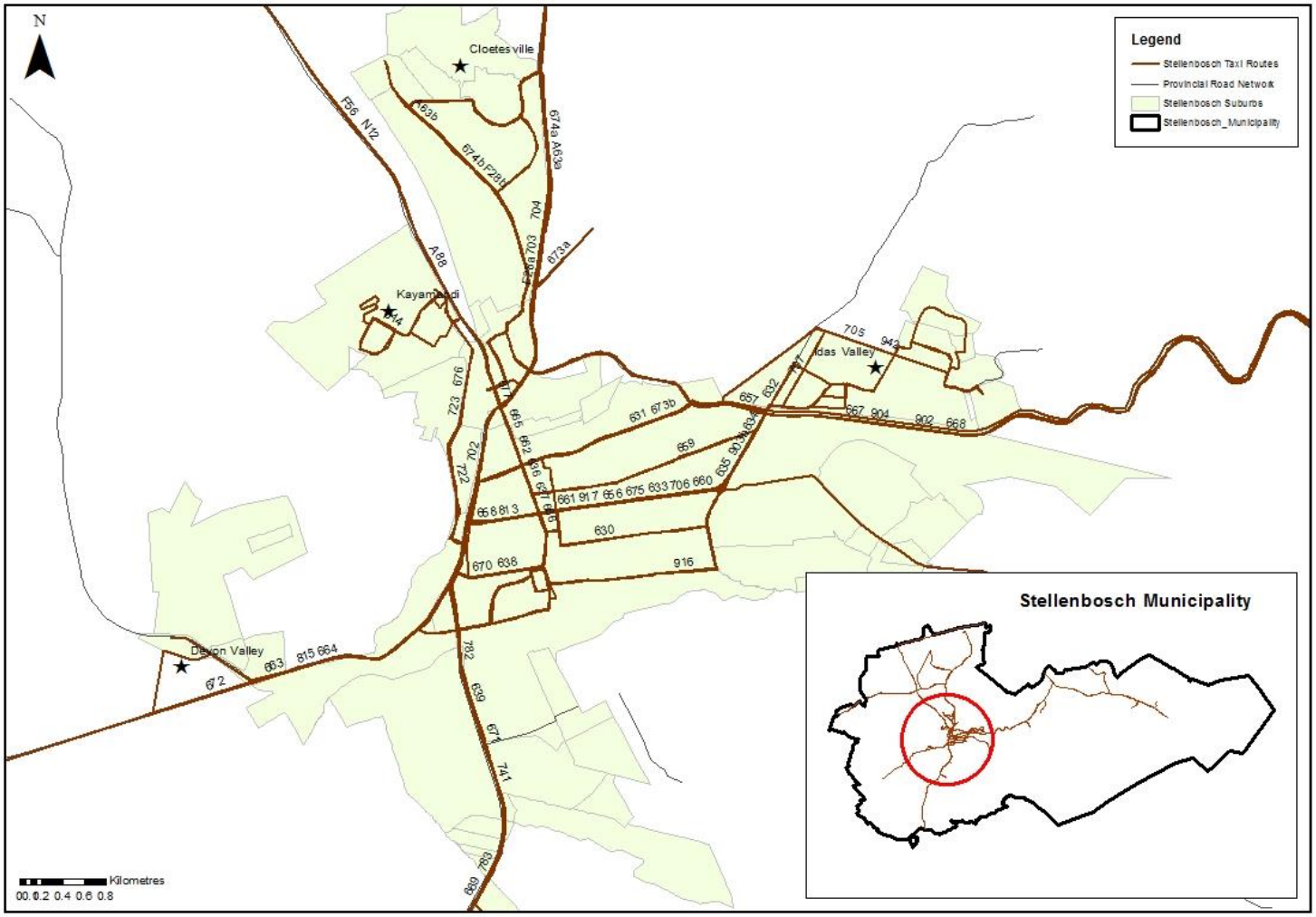
No.	Route Number	Origin / Destination
1	630	Stellenbosch (Bloem Street Rank) – Idasvalley
2	631	Stellenbosch (Bloem Street Rank) – Idasvalley
3	632	Stellenbosch (Bloem Street Rank) – Idasvalley
4	633	Stellenbosch (Bloem Street Rank) – Idasvalley
5	634	Stellenbosch (Bloem Street Rank) – Idasvalley
6	635	Stellenbosch (Bloem Street Rank) – Idasvalley
7	636	Stellenbosch (Bloem Street Rank) – Cloetesville
8	637	Stellenbosch (Bloem Street Rank) – Cloetesville
9	656	Stellenbosch (Bergzight Rank) – Idasvalley
10	657	Stellenbosch (Bergzight Rank) – Idasvalley
11	658	Stellenbosch (Bergzight Rank) – Idasvalley
12	659	Stellenbosch (Bergzight Rank) – Idasvalley
13	660	Stellenbosch (Bergzight Rank) – Idasvalley
14	661	Stellenbosch (Bergzight Rank) – Idasvalley
15	662	Stellenbosch (Bergzight Rank) – Koelenhof
16	663	Stellenbosch (Bergzight Rank) – Vlottenburg
17	664	Stellenbosch (Bergzight Rank) – Devon Valley
18	665	Stellenbosch (Bergzight Rank) – Cloetesville
19	666	Stellenbosch (Bergzight Rank) – Cloetesville
20	667	Stellenbosch (Bloem Street Rank) – Pniel

No.	Route Number	Origin / Destination
21	668	Stellenbosch (Bloem Street Rank) – Kylemore
22	669	Stellenbosch (Bloem Street Rank) – Somerset West
23	670	Stellenbosch (Bloem Street Rank) – James Town
24	671	Stellenbosch (Bloem Street Rank) – Jamestown
25	672	Stellenbosch (Bergzight Rank) – Lynedoch Station
26	673a and 673b	Stellenbosch (Bergzight Rank) – Elsenberg
27	674a and 674b	Stellenbosch (Bergzight Rank) – Elsenberg
28	675	Stellenbosch (Bergzight Rank) – Jonkershoek
29	676	Stellenbosch (Bergzight Rank) – Kayamandi
30	677	Stellenbosch (Bergzight Rank) – Kayamandi
31	722	Stellenbosch (Bergzight Rank) – Kayamandi
32	723	Stellenbosch (Bergzight Rank) – Kayamandi
33	754	Pniel – Paarl
34	755	Franchhoek – Paarl
35	813	Kayamandi – Stellenbosch (Bergzight)
36	814	Kayamandi – Stellenbosch (Bergzight)
37	873	Franchhoek – Paarl
39	A88	Stellenbosch (Bergzight) – Kuilsrivier
40	F28a and F28b	Stellenbosch (Stelmark) – Klapmuts
41	N12	Stellenbosch (Du Toit Station) – Belville
42	N42	Franschhoek – Paarl
43	Q80	Kayamandi – Lwandle

Error! Reference source not found. depicts all the taxi routes currently operating in the Stellenbosch Municipal area.

Error! Reference source not found. illustrates the route utilisation per registered operating route. It is evident that the majority of routes are 100% utilised during the specified peak hour.

Figure 3-15: Comprehensive Taxi Route Map for the Stellenbosch Municipality



Data collection in the form of surveys was conducted in order to provide the information required to prepare the Transport Register chapter. This data collection took place at a number of ranks within the Stellenbosch municipality. The data collection for the rank surveys was conducted on the following days:

Table 3-5: Rank Survey Dates and Times

Rank Surveyed	Duration of Survey	Date of Survey
Bergzight Formal Rank	06:00 – 09:00, 15:00 – 18:00	2 June 2015
Klapmuts Informal Rank	06:00 – 09:00, 15:00 – 18:00	3 June 2015
Franschhoek Formal Rank	06:00 – 09:00, 15:00 – 18:00	3 June 2015
Stellenbosch Station Informal Rank	06:00 – 09:00, 15:00 – 18:00	4 June 2015
Kayamandi Formal Rank	06:00 – 09:00, 15:00 – 18:00	4 June 2015
Kayamandi Bridge Informal Rank	06:00 – 09:00, 15:00 – 18:00	4 June 2015
Pniel Formal embayment	06:00 – 09:00, 15:00 – 18:00	11 June 2015

The data collection for the traffic volume information took place on the following days:

Table 3-6: Traffic Count Location and Dates and Times

Town	Intersection Surveyed	Duration of Survey	Date of Survey
Stellenbosch	R45/ Webersvalliepad	06:00 – 09:00, 15:00 – 18:00	10 June 2015
Stellenbosch	Bird St/ Masitandane Rd	06:00 – 09:00, 15:00 – 18:00	04 June 2015
Stellenbosch	Adam Tas/ R44	06:00 – 09:00, 15:00 – 18:00	09 June 2015
Stellenbosch	Helshoogte St/ Cluver St	06:00 – 09:00, 15:00 – 18:00	09 June 2015
Stellenbosch	Helshoogte St/ R 44	06:00 – 09:00, 15:00 – 18:00	09 June 2015
Franschhoek	R45/R301	06:00 – 09:00, 15:00 – 18:00	10 June 2015
Klapmuts	R44	06:00 – 09:00, 15:00 – 18:00	03 June 2015
Pniel	Helshoogte Rd/ Hoof St	06:00 – 09:00, 15:00 – 18:00	03 June 2015

Error! Reference source not found. illustrates the route capacity for various licensed routes originating in the Stellenbosch municipality. There are a number of public transport operations that do not strictly adhere to the licensed route, the origin ranks with the destination and number of vehicles as recorded during the data collection can be found in Error! Reference source not found..

It is evident from the table that there is currently a large number of passengers being moved to and from the Kayamandi rank and Bergzight rank. It is also evident that there are a large number of passengers being moved from the Bergzight rank to Idas Valley, Cloetesville and James Town. Within the Stellenbosch town, minibus taxi is the primary mode of public transport for commuters, this could be due to the lack of alternative public transport choices.

It is evident from the table that, in terms of the legal operating routes, the current supply of taxis is meeting the demand, with the majority of routes operating at above 75% service capacity. This implies that the current number of taxis operating on particular routes can continue operating until capacity is reached at 100%. This also implies that there are currently routes that are undersupplied with more persons being transported than the capacity of the operation.

As mentioned above **Error! Reference source not found.** illustrates a number of other destinations apart from those licensed by the PRE. It is evident from this table that there are a number of minibus taxi operations that are currently taking place. From the data collection approximately 1000 minibus taxi trips take place in the surveyed peak period at the surveyed ranks.

According to the information provided by the various Taxi Associations operating within the municipal area there are eleven minibus taxi facilities at present. The type and condition of the facilities is listed in Table 7-2.

Table 3-7 – Stellenbosch Local Municipality Public Transport Route Utilisation (2015) [5]

Taxi Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time incl. stops and turnaround (20%) - min.	Service Capacity	% Utilisation
Stellenbosch	630, 631, 632, 633, 634, 635 656, 657, 658, 659, 660, 661	Bergzight	Stellenbosch - Idas Valley	17:00 - 18:00	16	246	15	15	32	240	103%
Stellenbosch	636, 637, 665, 666	Bergzight	Stellenbosch - Cloetesville	17:00 - 18:00	16	240	15	15	43	240	100%
Stellenbosch	662	Bergzight	Stellenbosch - Koelenhof	16:30 - 17:30	1	15	1	15	172	15	100%
Stellenbosch	663	Bergzight	Stellenbosch - Vlottenburg	17:00 - 18:00	5	45	5	15	71	75	60%
Stellenbosch	664	Bergzight	Stellenbosch - Devon Valley	07:00 - 08:00	4	45	3	15	36	60	75%
Stellenbosch	667	Bergzight	Stellenbosch	No Activity took place during survey period							

[5] As indicated in the table, for certain routes no activity took place and was recorded as such. It is possible that these operations are no longer taking place at the locations as per the PRE route descriptions, that these activities took place outside of the survey period.

Taxi Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time incl. stops and turnaround (20%) - min.	Service Capacity	% Utilisation
			- Pniel								
Stellenbosch	668	Bergzight	Stellenbosch - Kylemore	16:30 - 17:30	10	143	9	15	102	150	95%
Stellenbosch	669	Bergzight	Stellenbosch - Somerset West	06:45 - 07:45	4	60	4	15	192	60	100%
Stellenbosch	670, 671	Bergzight	Stellenbosch - James Town	08:00 - 09:00	10	152	8	15	61	150	101%
Stellenbosch	672	Bergzight	Stellenbosch - Lynedoch	No Activity took place during survey period							
Stellenbosch	673, 674	Bergzight	Stellenbosch - Elsenberg	No Activity took place during survey period							
Stellenbosch	675	Bergzight	Stellenbosch - Jonkershoek	No Activity took place during survey period							
Kayamandi	676, 677, 722, 723	Kayamandi	Kayamandi - Stellenbosch	07:00 - 08:00	28	419	25	15	31	420	100%
Franschhoek	754	Pniel	Pniel - Paarl	07:15 - 08:15	4	47	4	15	195	60	78%

Taxi Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time incl. stops and turnaround (20%) - min.	Service Capacity	% Utilisation
Franschhoek	755, 873, R13, R14, R15, R16, N42, A65	Franschhoek	Franschhoek - Paarl	16:30 - 17:30	4	50	4	15	310	60	83%
Kayamandi	813, 814	Kayamandi	Kayamandi - Stellenbosch	No Activity took place during survey period							
Stellenbosch	A88	Bergzight	Stellenbosch - Kuilsrivier	No Activity took place during survey period							
Stellenbosch	F28	Stelmark	Stellenbosch - Klapmuts	No Activity took place during survey period							
Kaymandi	N12	Du Toit	Kayamandi - Bellville	No Activity took place during survey period							
Kaymandi	Q80	Kayamandi	Kayamandi - Lwandle	No Activity took place during survey period							
Kaymandi	Kayamandi / Stellenbosch	Kayamandi	Kayamandi - Stellenbosch	No Activity took place during survey period							
Kaymandi	Long Distance	Kayamandi		No Activity took place during survey period							
Kayamandi	T46, Long Distance	Kayamandi		No Activity took place during survey period							

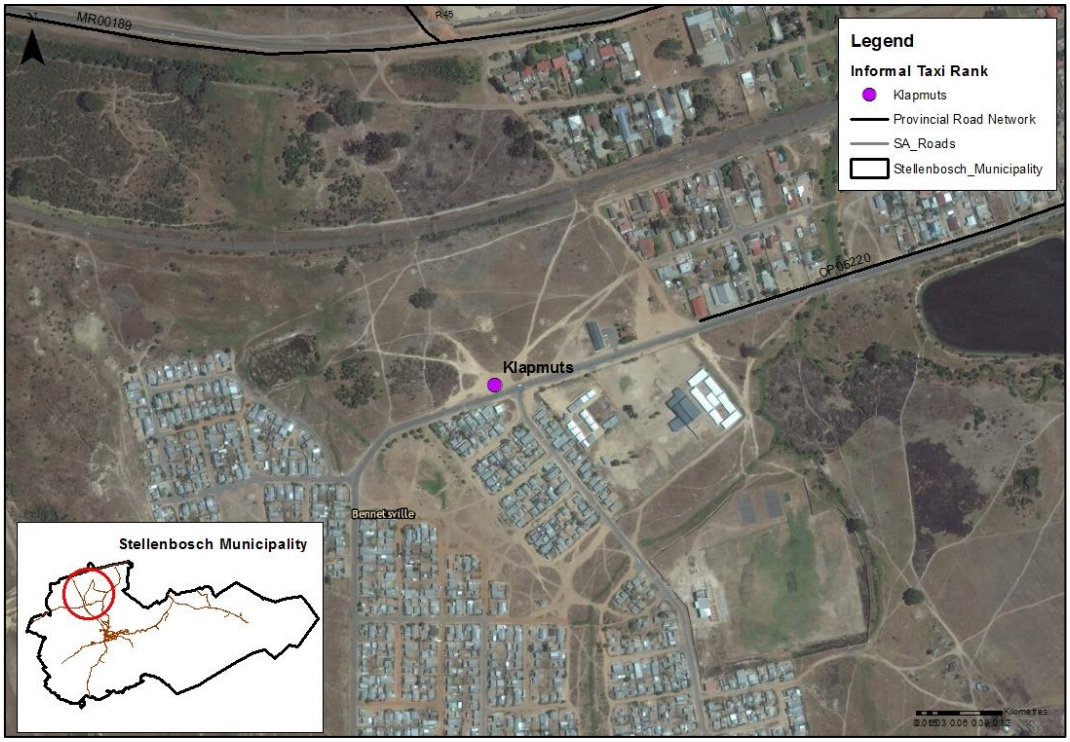
Taxi Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time incl. stops and turnaround (20%) - min.	Service Capacity	% Utilisation
Stellenbosch	C/S, Staff, Scholars			No Activity took place during survey period							
Franschhoek	G57, L15, L61, L67	Franschhoek		No Activity took place during survey period							
Franschhoek	Organised Parties	Franschhoek		No Activity took place during survey period							

Table 3-8: Minibus Taxi Facilities (2015)

Public Transport Facility Condition (G = Good condition, B = Bad condition, D = Doesn't exist)															
No.	Name	Street Name	Facility Type	On/ off Street	Service Type	Paved Surface	Gravel Surface	Passenger Shelter	Vehicle Shelter	Passenger Seating	Shelter Lighting	Street Lighting	Ticket/ Booking Office	Restrooms (toilets)	Wheelchair ramp
1	Bergzight	c/o Merriman and Bird St	Formal Rank	Off Street	Commuter	G	D	G	G	D	G	G	D	G	G
2	Kayamandi	Rand Rd	Formal - Embayment	Off Street	Commuter	G	D	G	D	G	D	G	D	D	D
3	Kayamandi Mall	Rand Rd (at mall)	Informal facility	On Street	Commuter	G	D	D	D	D	D	G	D	D	D
4	Kayamandi Bridge	Bird St	Informal facility	Off Street	Commuter	D	G	D	D	D	D	D	D	D	D
5	Stellenbosch Station	Adam Tas Rd	Informal facility	Off Street	Commuter	G	D	D	D	D	D	G	D	D	D
6	Sawmills Pick up Point	Adam Tas Rd	Formal - Embayment	Off Street	Commuter	G	D	G	D	G	D	G	D	D	D
7	Franschhoek	c/o Daniel Hugo & Reservoir St East	Formal - Demarcated bays	Off Street	Commuter	G	D	D	D	D	D	G	D	D	D
8	Franschhoek Layby	Main Rd (at Pick 'n Pay)	Formal - Demarcated bays	Off Street	Commuter	G	D	G	D	G	D	G	D	D	D
9	Klapmuts	Merchant St	Informal facility	Off Street	Commuter	D	G	D	D	D	D	D	D	D	D
10	Pniel	Helshoogte Rd	Formal - layby	Off Street	Commuter	G	D	D	D	D	D	G	D	D	D
11	Lanquedoc	Main Rd	Formal Rank	Off Street	Commuter	G	D	D	D	D	D	G	D	D	D

Error! Reference source not found. indicates the location of the Klapmuts Informal Taxi Rank.

Figure 3-16: Klapmuts Taxi Rank

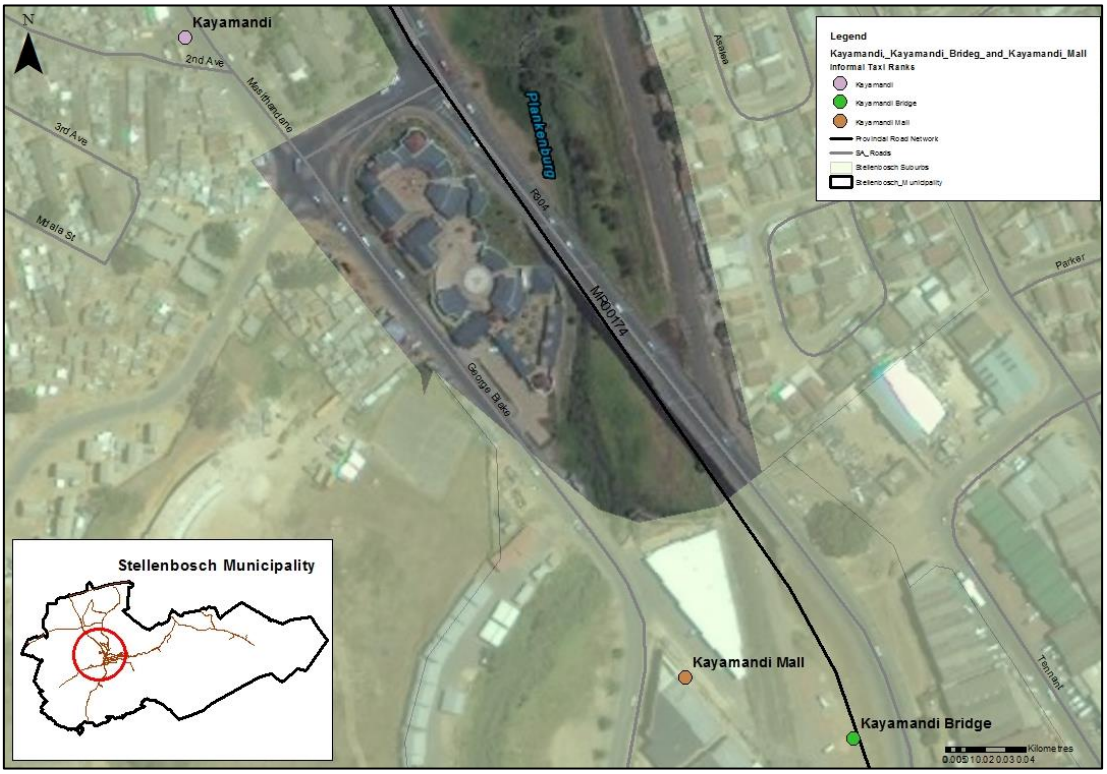


Error! Reference source not found. shows that this facility is informal with no infrastructure at all. Commuters are also exposed to the weather elements due to an absence of shelter facilities.

Figure 3-17: Klapmuts Taxi Rank

Error! Reference source not found. shows where the Kayamandi, Kayamandi Mall and Kayamandi Bridge informal Taxi Ranks are located. Kayamandi Taxi Rank has the most facilities out of the three ranks.

Figure 3-18: Kayamandi, Kayamandi Mall & Kayamandi Bridge Informal Taxi Ranks



Error! Reference source not found., **Error! Reference source not found.** and **Error! Reference source not found.** shows the Kayamandi, Kayamandi Mall and Kayamandi Bridge Taxi Ranks.

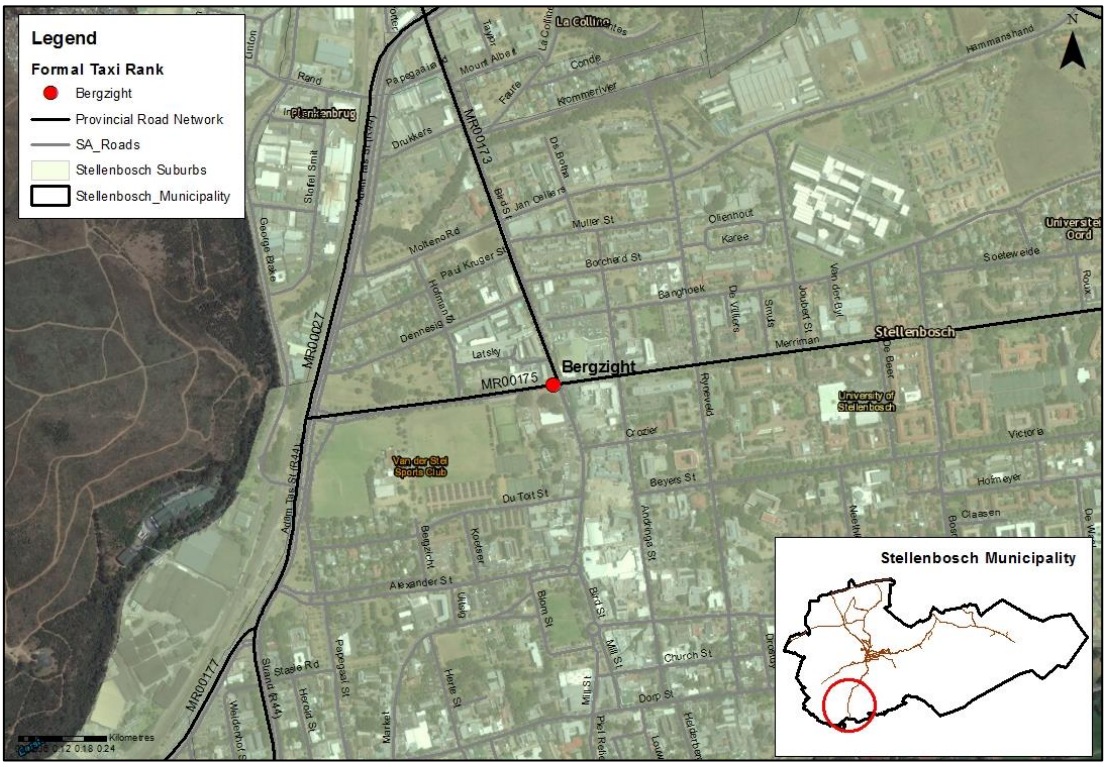
Figure 3-19: Kayamandi, Kayamandi Mall and Kayamandi Bridge Taxi Ranks

Figure 3-20: Kayamandi Mall Taxi Rank

Figure 3-21: Kayamandi Bridge Taxi Rank

Error! Reference source not found. shows the location of the Bergzight formal Taxi Rank in the town of Stellenbosch.

Figure 3-22: Bergzight Formal Taxi Rank

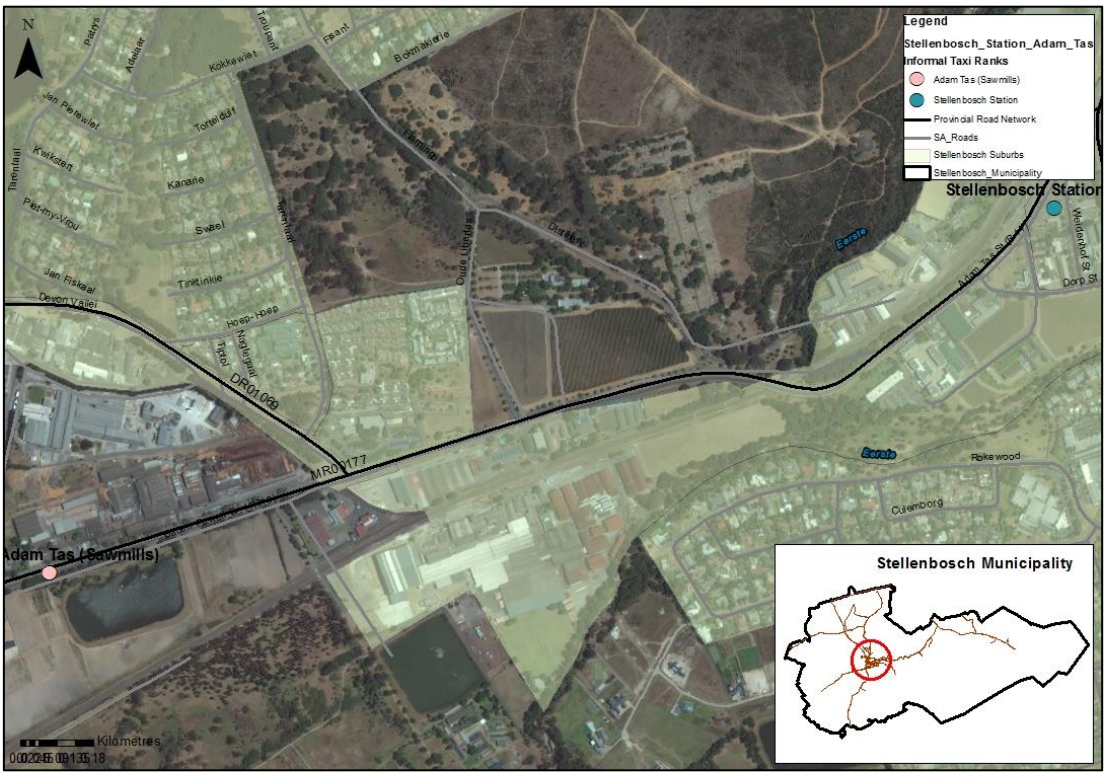


Error! Reference source not found. shows the Bergzight Taxi Rank, the only formal taxi rank facility within the Stellenbosch Municipality.

Figure 3-23: Bergzight Taxi Rank

Error! Reference source not found. shows the location of the Stellenbosch Station Informal Taxi Rank and the Sawmills Pick-up point in Adam Tas Road. Both these facilities are located in the town of Stellenbosch.

Figure 3-24: Stellenbosch Station and Sawmills Informal Taxi Ranks



Error! Reference source not found. depicts the informal taxi rank which is located in a parking lot opposite the Stellenbosch railway station. This space is not a dedicated taxi facility and is also used as a parking area.

Figure 3-25: Stellenbosch Station Informal Rank

(Source: Google Earth)

Error! Reference source not found. depicts the pick-up point located outside the Sawmills on Adam Tas Road. This facility is mainly used in the mornings to drop off the workers and in the afternoon as a pick-up point.

Figure 3-26: Sawmills Pick-up Point

Error! Reference source not found. shows the location of the informal taxi ranks in Pniel and Lanquedoc.

Figure 3-27: Pniel and Lanquedoc Informal Taxi Ranks

Error! Reference source not found. shows the informal taxi rank in Pniel. There are currently no facilities for the taxis or commuters at this location

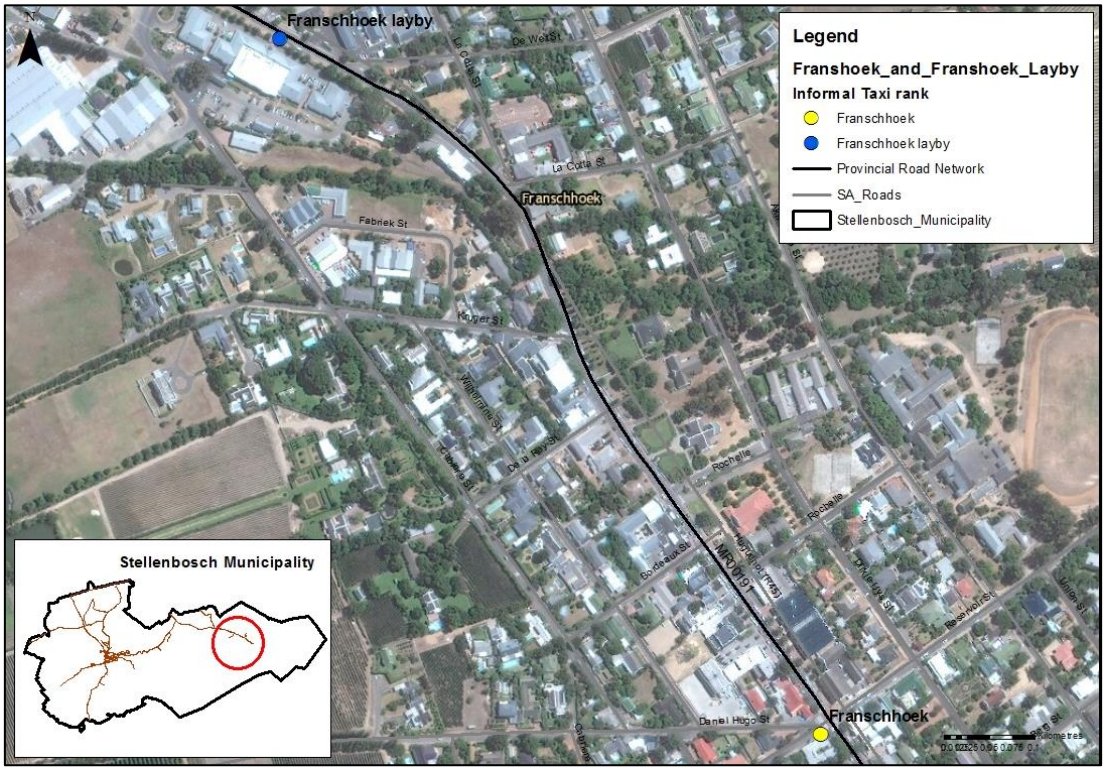
Figure 3-28: Pniel Informal Taxi Rank

Error! Reference source not found. depicts the taxi rank in Lanquedoc. The taxis are presently making use of a parking lot which belongs to the church so there are no amenities for taxis and commuters using this rank.

Figure 3-29: Lanquedoc Informal Taxi Rank

Error! Reference source not found. shows the location of the taxi facilities located in Franschhoek namely the Franschhoek Taxi Rank and the Franschhoek Lay-by.

Figure 3-30: Franschhoek & Franschhoek Lay-By Taxi Facilities



Error! Reference source not found. shows the Franschhoek taxi rank which consists of six on-street bays allocated for use as a taxi rank.

Figure 3-31: Franschhoek Taxi Rank

Error! Reference source not found. depicts the lay-by facility use as a minibus taxi rank in front of the Pick ‘n Pay. This facility has a shelter for commuters and sufficient lighting.

Figure 3-32: Franschhoek Layby

3.4.4 Long Distance Bus

Greyhound:

There are two routes operated by Greyhound through the Stellenbosch Municipality, namely:

- Cape Town – Port Elizabeth – Durban and
- Durban – Port Elizabeth – Cape Town.

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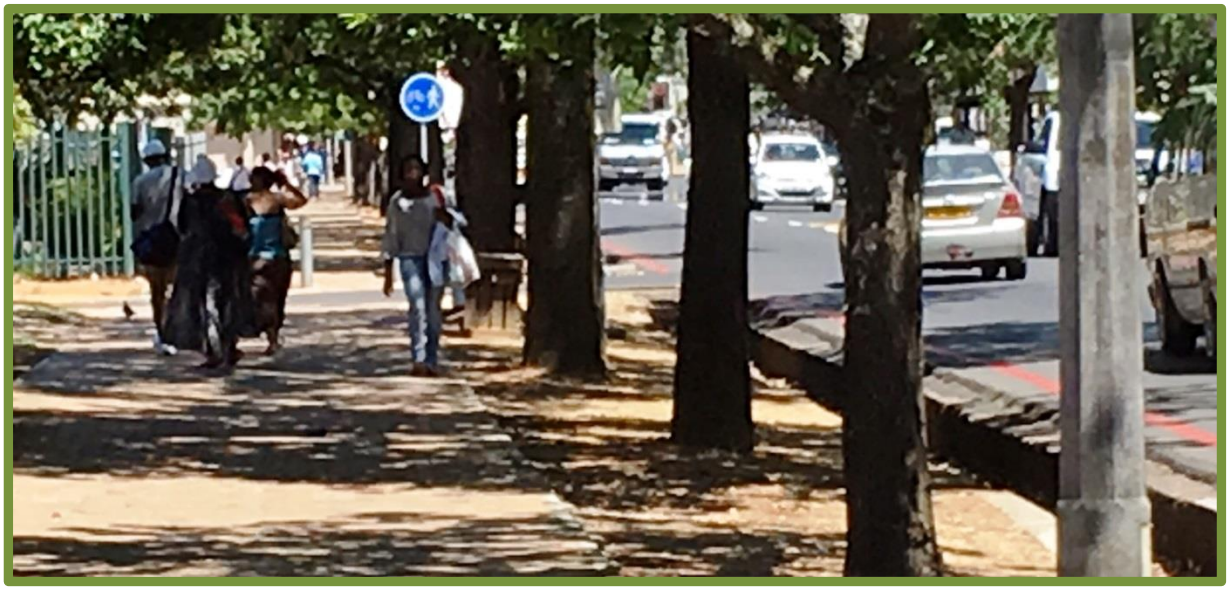
2016 – 2020



Final Report for Council Approval:

12 February 2016

Royal HaskoningDHV
Enhancing Society Together

The following destinations are available along these routes:

Cape Town, Bellville, Somerset West, Caledon, Riviersonderend, Swellendam, Heidelberg, Riversdale, Albertina, Mosselbay (Voorbaai), George (St Mark's Square), George (Sasol Garage), Wilderness, Sedgefield, Knysna, Plettenberg Bay, Storms River, Humansdorp, Jeffreys Bay, Port Elizabeth, Grahamstown (Kimberley Hall), Grahamstown (Frontier Hotel), Peddi, King Williams Town, East London, Kei Bridge, Butterworth, Umtata, Umtata (Office), Mount Frere, Kokstad (Shoprite), Kokstad (Wimpy), Port Shepstone and Durban.

Both routes depart Stellenbosch from a stop on Merriman Avenue under the Walkover Bridge (opposite the Student Centre called the Neelsie) twice a day at 19:45 for the Cape Town – Port Elizabeth – Durban route and at 08:50 for the Durban – Port Elizabeth – Cape Town route.

Translux:

The Translux bus currently operates along four routes through Stellenbosch which depart from the Stellenbosch Station. **Error! Reference source not found.** lists all the destinations served by these four routes and the departure times from Stellenbosch.

Table 3-9: Translux Bus Routes

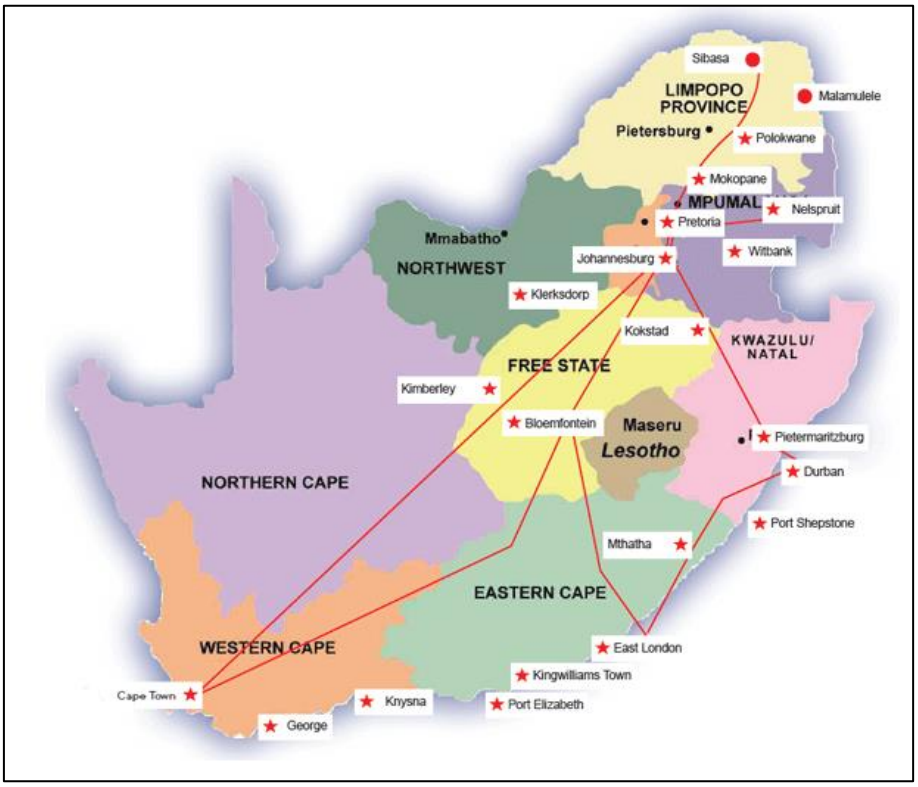
Destination and Time of Departure			
Route 1140	Route 1141	Route 1114	Route 1115
18:30	06:05, 06:30, 08:20	09:30	08:20
Aberdeen	Bellville	Butterworth	Cape Town
Beaufort West	Cape Town	Caledon	
Cathcart		Durban	
Cradock		East London	
East London		George	
Graaff- Reinet		Grahamstown	
King Williams Town		Heidelberg	
Laingsburg		Humansdorp	
Paarl		Idutywa	
Queenstown		King Williams Town	
Stutterheim		Knysna	
Tarkastad		Kokstad	
Worcester		Mosselbay	

Destination and Time of Departure			
Route 1140	Route 1141	Route 1114	Route 1115
18:30	06:05, 06:30, 08:20	09:30	08:20
		Mount Frere	
		Mthatha	
		Plettenberg Bay	
		Port Elizabeth	
		Port Shepstone	
		Qumbu	
		Riversdale	
		Riviersonderend	
		Sedgefield	
		Somerset West	
		Storms River	
		Swellendam	
		Tsolo	
		Wilderness	

Source: Translux, 2015

Error! Reference source not found. illustrates the route map for the Translux bus service.

Figure 3-33: Translux Long Distance Route Map



Source: Translux, 2015

Intercape:

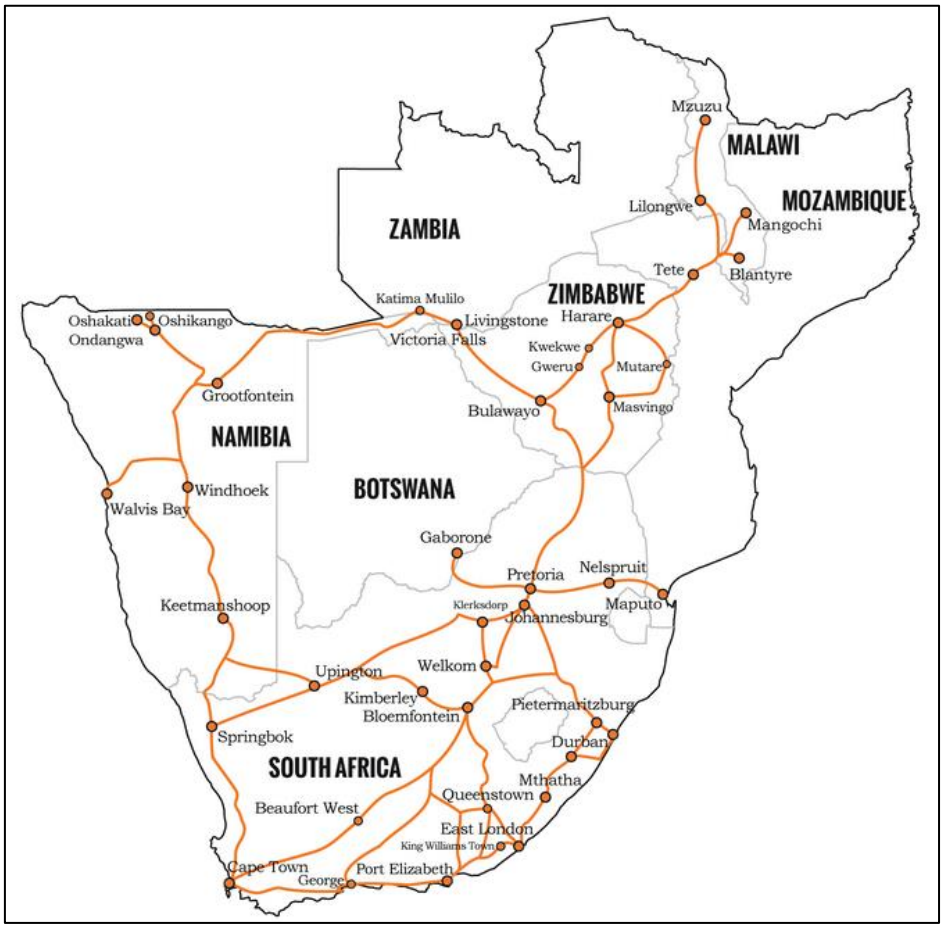
The Intercape bus departs from the Merriman Avenue stop (under the footbridge, opposite the Student Centre called the Neelsie). **Error! Reference source not found.** lists the three routes which provide a long distance bus service to Stellenbosch and the corresponding time of departure from Stellenbosch whilst **Error! Reference source not found.** illustrates the Intercape Bus Route Map.

Table 3-10: Intercape Bus Routes

Route Name	Time of Departure from Stellenbosch
Mainliner Cape Town – Port Elizabeth (D)	06:30
Sleepliner MOS – Pretoria	15:45
Mainliner Cape Town – East London – Umtata	18:30

Source: Intercape, 2015

Figure 3-34: Intercape Route Map



Source: Intercape, 2015

An enquiry was made as to the reason for the long distance bus companies opting to us the embayment outside the Neelsies as their pick-up point rather than the Bergzight Public Transport Terminal; however this could not be concluded.

3.4.5 Conclusions

The passenger rail services in the Stellenbosch municipal area are part of the wider network serving the region and are well utilised in the peak. There is also a moderate growth in passenger numbers. Consideration should be given to improving the service by increasing the frequency of the service and upgrading facilities.

Bus services between Stellenbosch and other destinations in the Westen Cape are limited. These services shuld be expanded to provide services to major detinations such as the Cape Town Internatinal Airport and the Cape Town CBD. Improved facilities should be provided at stops and a locality identified for use as a bus terminal.

Minibus Taxi vehilcles are not universally accessible and no services for the disabled can be offered. Consideration should be given to the introduction of larger vehicles that meet accessibility requirements. The establishment of an impound facilitiy is required to enable

more effective law enforcement to reduce the oversupply of minibus vehicles caused by unlicenced operators.

Public transport facilities are inadequate in many cases with infrastructure such as shelters, hard standing and ablutions lacking. A programme and the necessary funding should be put in place to upgrade facilities. Consideration shoud be given to the possible introduction of an upgraded Integrated Public Transport Network on certain routes with the provision of upgraded infrastructure and universally accessible vehicles.

3.5 DESCRIPTION OF OTHER PUBLIC TRANSPORT SERVICES

3.5.1 Metered Taxi Services

There are a number of metered taxi services operating in the Stellenbosch Municipal area. The towns of Stellenbosch, Franschhoek, Pniel and Klapmuts are served by metered taxi services which also cater for disabled persons on request.

3.5.2 Accessible Transport

At present there is no licensed transport service which serves the disabled community in the Stellenbosch Municipal area.

3.5.3 Non-Motorised Transport (NMT)

Non-motorised transport is a common mode of transport used in the Stellenbosch Municipal area, particularly by those who have no alternative or use it at some point in the trip chain. Chapter 10 provides a detailed overview of NMT.

3.5.4 Stellenbosch Local Airport

There is a local airport located in the Stellenbosch Municipality which is mainly used by the Stellenbosch Flying Club however it is open to the public. **Error! Reference source not found.** illustrates the location of the Stellenbosch Local Airport.

Figure 3-35: Location of Stellenbosch Local Airport

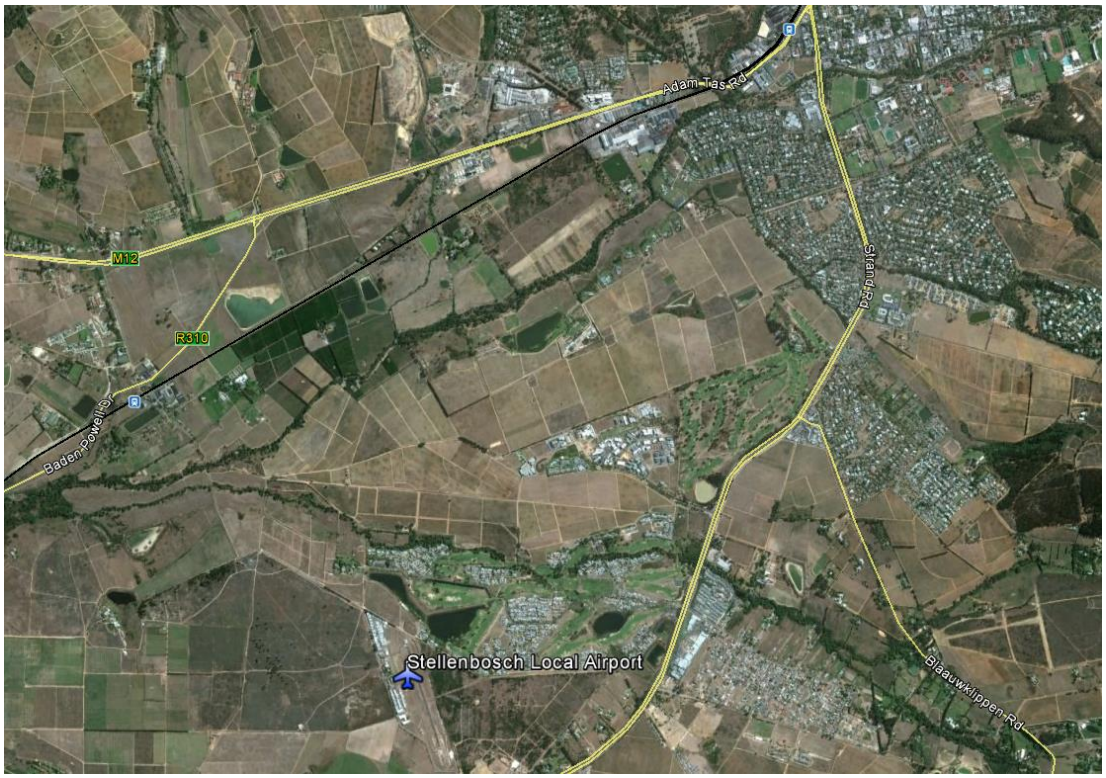


Table 3-11: Stellenbosch Local Airport: Airfield Data

ICAO[6] Code	FASH
Coordinates	S 33° 58” 83’ / E 18° 49” 37’
Elevation	105m
Magnetic Variation	23° West
Runway Surface	Hard

Source: SkyVector, 2015

3.6 MODAL SPLIT

Classified traffic surveys were conducted at a number of locations within the Stellenbosch municipal area. The location of the traffic count stations is illustrated in **Error! Reference source not found.**.

[6] International Civil Aviation Organisation

Figure 3-36: Cordon Count Locations

The traffic counts were used to determine the private vehicle and road based public transport passenger modal split for the town of Stellenbosch. This road based modal split is based on the inbound traffic during the 06:00 – 09:00 peak period and is shown in **Error! Reference source not found.**.

Error! Reference source not found. indicates that 86.6% of passengers are transported by light vehicles, 12% in public transport and 1.4% in heavy vehicles. The daily modal split for the City of Cape Town is (2012) 61% private, 36% public transport and 3: NMT[7] (and 58% private, 42% public when excluding NMT and cycling). The modal split[8] in South Africa for work trips is: 21% walk, 39% car, 28% taxi, 6% bus and 4% train (and 1% for other).

Table 3-12- Stellenbosch town Road Based Passenger Modal Split

Light Vehicles	Minibus Taxi	Bus	Heavy Vehicles
86.6%	7.5%	4.5%	1.4%

Note that no peak hour passenger figures are available for commuter rail, thefore rail was excluded from the modal split calculations.

3.7 DESCRIPTION OF PUBLIC TRANSPORT INSTITUTIONAL AND ORGANISATIONAL ARRANGEMENTS

3.7.1 Passenger Rail

[7] City of Cape Town Comprehensive Integrated Transport Plan 2013.
[8] According to Chapter 7: Towards a More Optimal Passenger Transport System for South Africa: Design of Public Transport Operating Subsidies. These results are for 2011.

The passenger rail service is operated by Metrorail a division of PRASA that reports to the Department of Transport.

3.7.2 Bus

Scheduled bus services are operated by Golden Arrow Bus Services (GABS) in terms of an operating contract with the Western Cape Government.

3.7.3 Minibus Taxi

There are three minibus taxi associations operating within the Stellenbosch Municipality at present. These are:

- Stellenbosch Taxi Association
- Kayamandi Taxi Association
- Franschhoek Taxi Association

Minibus Taxi operators must belong to one of the associations before they will be considered for an operating licence. The associations are not formalised as legal entities and are not able to tender for operating contracts such as those that may be considered for the future Integrated Public Transport System in Stellenbosch. For tendering purposes, the associations must formalise as business entities e.g. a co-operating or section 21 company.

3.7.4 Metered Taxi

There are a number of private metered taxi companies providing services within the Stellenbosch Municipal area.

3.8 ROADS AND TRAFFIC

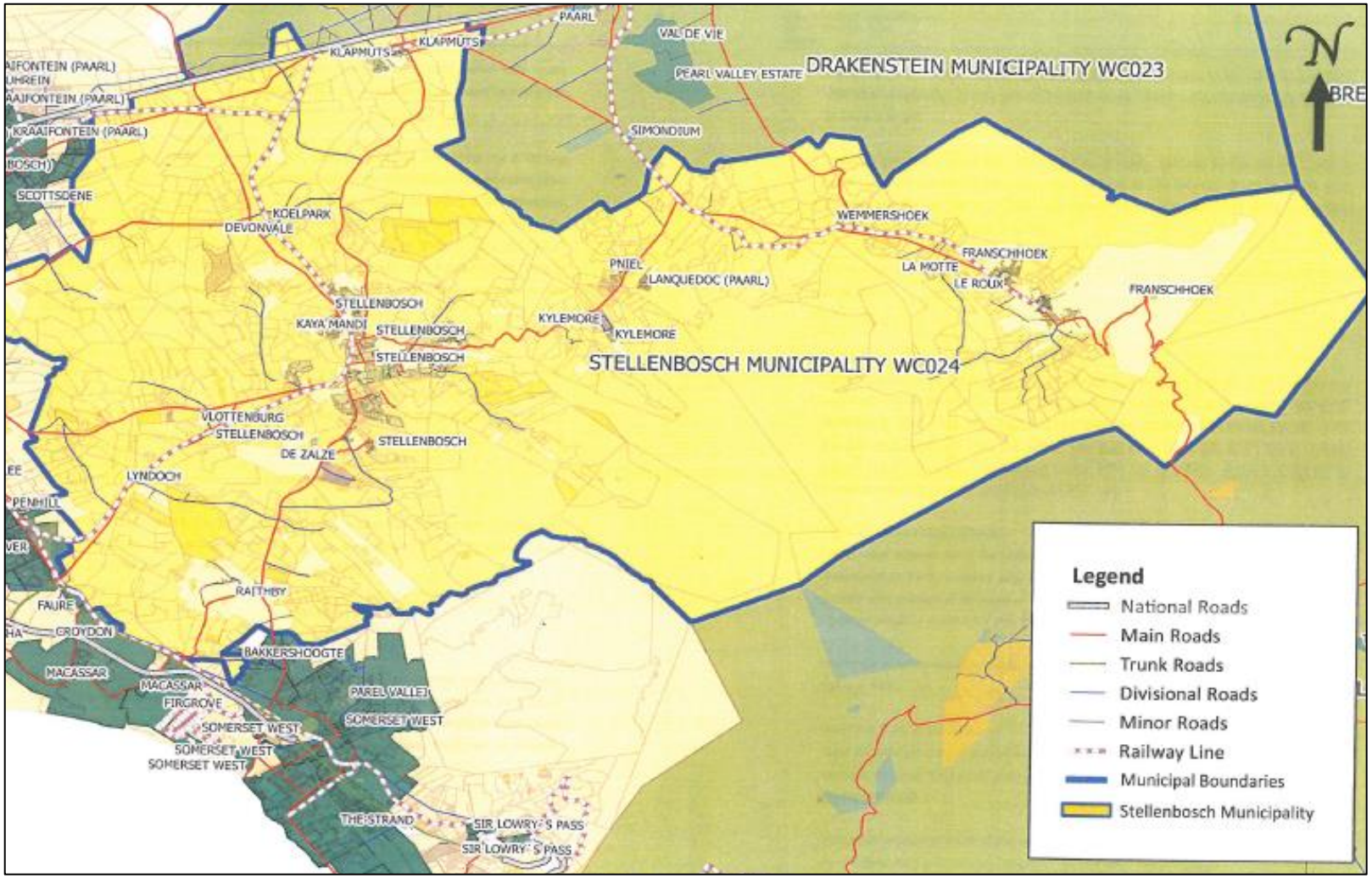
3.8.1 Major Road Network

The Stellenbosch Municipality is served by a network of Provincial Main Roads including the R44, R310, R304, R101 and R45 as well as a network of Municipal Roads. According to the 2010 PMS, the total length of the Municipal paved road network within the Stellenbosch municipal area is 309 km comprising of the following:

- 303.3 km of bitumen paving
- 5.7 km of block paving
- 37 m of concrete paving

The Stellenbosch major road network is shown in **Error! Reference source not found.**.

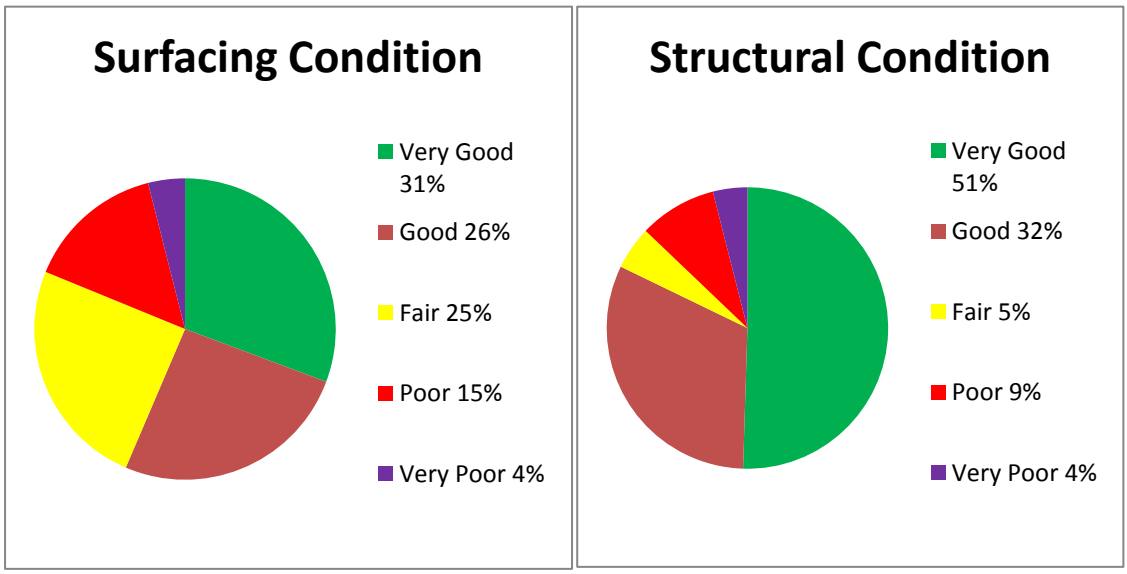
Figure 3-37: The Stellenbosch Major Road Network



3.8.2 Condition of Major Roads

According to the 2010 PMS, the average condition of the road network was rated as “poor” with 19% of the surfacing and 13% of structures rated in the “poor” to “very poor” categories as indicated in **Error! Reference source not found.**.

Figure 3-38: Road Condition (PMS 2010)



3.8.3 Level of Congestion of Major Road Network

The Stellenbosch Roads Masterplan (2012) carried out an analysis of traffic congestion in Stellenbosch. The analysis indicated that the following road sections are operating beyond their capacity and should be investigated to ascertain the most appropriate means of reducing congestion in order to cope with the long term growth of the town:

- The R304 before its intersection with the R44
- The R44 south between Paradyskloof and the van Reede intersection
- Bird Street between the R44 and Du Toit Street
- Merriman and Cluver Streets between Bird Street and Helshoogte Road
- Dorp Street between the R44 and Piet Retief Street
- Adam Tas Road between its junction with the R44 an Merriman Street
- Piet Retief Street
- Van Reede and Vrede Streets between the R44 and Piet Retief Street

In addition, a number of access roads are under pressure, including the following:

- The Welgevonding Access Road
- Lang Street into Cloetesville

- Rustenburg Road into Idas Valley
- The Tegnopark Access Road

It is important that the local and regional function of these roads be considered as the congestion experienced may relate to origins / destinations outside of Stellenbosch.

3.9 FREIGHT TRANSPORT

An existing weigh bridge is located just before the N1 on-ramp to Cape Town off the R304 north, in Joosenberg Vlakte.

Error! Reference source not found. shows the location of this weigh bridge which is owned by the Western Cape Government.

Figure 3-39: Location of Existing Weigh Bridge

The freight routes currently operating through the Stellenbosch Municipality are identified in Chapter 9: Freight Strategy. There are currently no facilities to impound heavy vehicles and therefore law enforcement in respect of overloaded vehicles is limited.

Typically the vehicles are fined for overloading but are then allowed to continue as there is no secure facility to impound them until the load can be off loaded onto another vehicle. The damage to the road network thus continues.

3.10 FINANCIAL INFORMATION

Error! Reference source not found. lists the road, traffic and transport related expenditure for the 2015/16 to 2017/18 financial years for the Stellenbosch Municipality. Further details of the relevant projects and finance sources can be found in Chapter 12.

Table 3-13: Financial Information for Stellenbosch Municipality

Category	Annual Expenditure - R		
	2015/16	2016/17	2017/18
Engineering Services General	2 500 000	800 000	1 800 000
Roads and Stormwater	28 350 000	28 700 000	36 750 000
Traffic Engineering	9 075 000	11 700 000	7 125 000
Transport Planning	10 550 000	11 000 000	9 750 000
Traffic Services	150 000	150 000	0
Total	50 625 000	52 350 000	55 425 000

3.11 INTEGRATED PLANNING STRUCTURES

The Stellenbosch Municipality forms part of the greated Cape Town functional region ans it is essential that the Municipality is part of the integrated planning stuctures that have been established to ensure synergy between iss relating to public transport, freight movements etc. Transport for Cape Town has established an Intermodal Planning Committee (IPC) in terms of the NLTA. A Functional Area Sub-Committee to the IPC has been established of which the Stellenbosch Municipality is a member.

Table 3-14: Taxi Operations originating in the Stellenbosch Local Municipality[9]

Destination (as captured during Surveys)	Rank (survey was conducted at)							Grand Total
	Bergzight	Franschhoek	Kayamandi	Klapmuts	Lanquedoc	Pniel	Stellenbosch Station	
Kayamandi	146					4	5	155
Cloetesville	74						7	81
Idas valley	53						28	81
Kylemore	42	6				1	17	66
Somerset	35							35
Jamestown	28						8	36
Devon valley	16						6	22
Vlottenburg	14						1	15
Paradyskloof	10		5					15
Stellenbosch	9	3	92		3	19	4	130
Koelenhof	4							4
Jonkershoek	1		1				1	3
Technopark	1		1					2

[9] A total of 1076 minibus taxi trip were recorded, however 158 trips thereof did not indicate valid destinations

Destination (as captured during Surveys)	Rank (survey was conducted at)							Grand Total
	Bergzight	Franschhoek	Kayamandi	Klapmuts	Lanquedoc	Pniel	Stellenbosch Station	
Pniel	1					1	3	5
Groendal		29						29
Franshoek		27						27
Paarl		8		20	29	15		72
Bosbou		1						1
Saagmeule		1						1
Somerset west			34				2	36
Plywood			13					13
Hospital			7					7
Unipark			7					7
Waterkant			5					5
Paarl/shoprite				2				2
Paarl, val de vie contract				1				1
Lanquedoc						5		5
Kayamandi mall						2		2

Destination (as captured during Surveys)	Rank (survey was conducted at)							Grand Total
	Bergzight	Franschhoek	Kayamandi	Klapmuts	Lanquedoc	Pniel	Stellenbosch Station	
Khayelitsha							26	26
Westbank							12	12
Station							7	7
Mfuleni							6	6
Delft							5	5
Bellville							1	1
Eersteriver							1	1
Graff							1	1
Hildeveldt							1	1
Grand Total	434	75	165	23	32	47	142	918

4. SPATIAL DEVELOPMENT FRAMEWORK

SYNOPSIS:

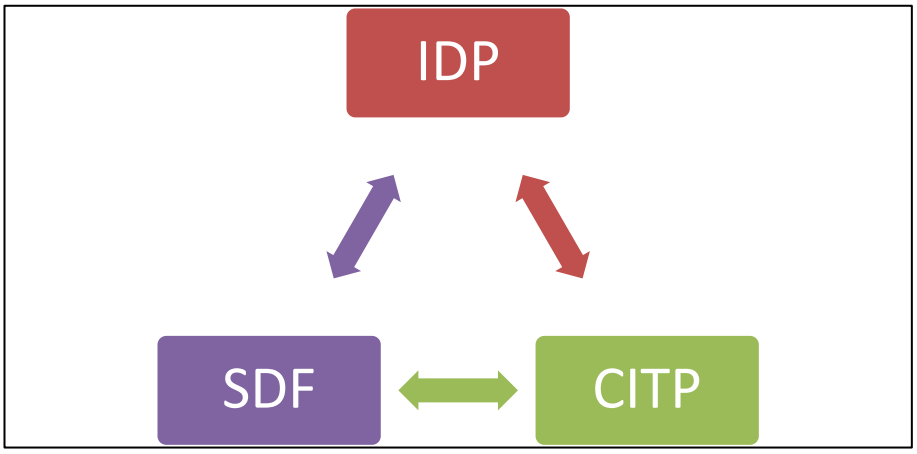
- ≈ the SDF provides a clear direction of the land development strategies of the Stellenbosch Municipality and identifies focus areas of the CITP including:
  - transport corridors and nodes
  - areas identified for mixed use and densification in support of public transport
  - measures to discourage urban sprawl
- ≈ The vision of the Provincial Land Transport Framework provides a framework for a transport system built on the pillars of sustainability, equity, access to opportunity in an economically efficient manner and safety that are taken into account to ensure cohesive planning with surrounding areas
- ≈ The following focus areas are identified:
  - The need to increase road corridor capacities, public transport linkages along with cycling and walking facilities to support the development of increased land development densities
  - The adoption of the principles of Transit Oriented Development (TOD) and Transport Demand Management (TDM) to reduce congestion of the road network as this negatively impacts economic growth and the "greenness" of the Municipality.
  - The encouragement of the development of Non-motorised Transport (NMT) infrastructure and networks to reduce the demand for private car travel and improve the livability of neighborhoods and communities within the area.
  - The rail system should remain the backbone of the transport system in the functional region so rail capacity and infrastructure maintenance should receive attention in the Integrated Transport Plan.

4.1 INTRODUCTION

The following chapter will provide an overview of the Spatial Development Framework (SDF) and elaborate on the implications thereof on the CITP for the Stellenbosch Municipality.

In addition to the SDF, is the Integrated Development Plan (IDP) which functions as the over-arching strategy providing guidance and direction to both the SDF and the CITP for the functional region. It is therefore of utmost importance that the CITP is aligned to the SDF in order to successfully realise the developmental vision and goals for the municipal area. This relationship is illustrated in Figure 4-1.

Figure 4-1: Relationship between IDP, SDF and CITP



There are a number of documents which function as strategic informants to the transport planning process; those with specific relevance to the SDF are listed below:

- Western Cape Provincial Land Transport Framework (PLTF)
- Western Cape Provincial Spatial Development Plan (PSDF)
- Stellenbosch Municipality Integrated Development Plan (IDP)
- Stellenbosch Municipality Spatial Development Framework (SDF)

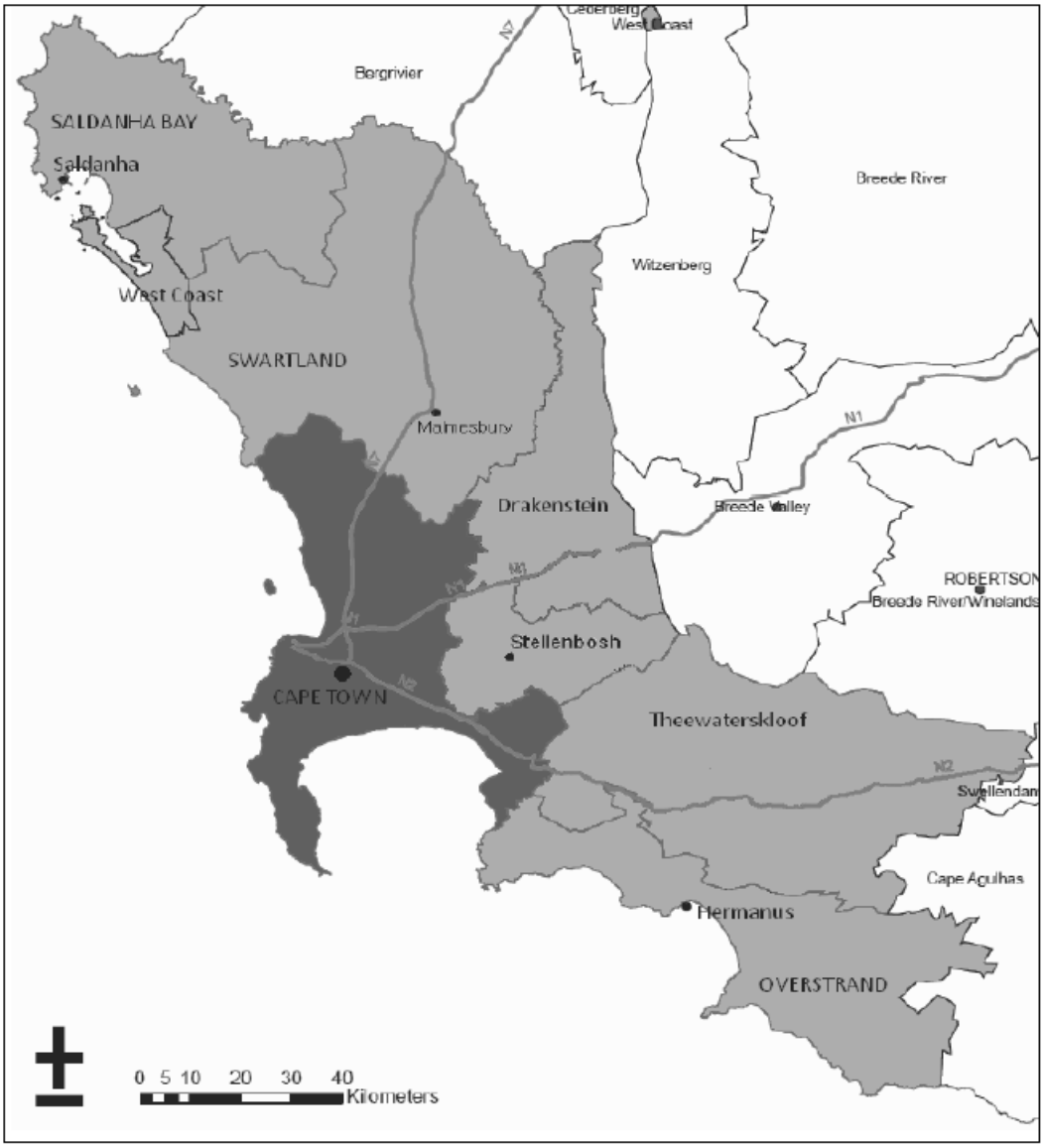
4.2 WESTERN CAPE PROVINCIAL LAND TRANSPORT FRAMEWORK

The PLTF referred to in this document is the 2011/12 version which will be updated in the next year. It is therefore recommended that this section of the CITP be revised once the updated PLTF is available.

In broad terms the purpose of the PLTF is to inform all transport and land-use related planning in the Western Cape Province. Decision-making processes should thus be guided by the principles set out in the PLTF. This is with respect to any transport infrastructure development, management and investment, public transport, non-motorised transport, freight transport and land transport safety.

According to the Organisation for Economic Co-operation and Development (OECD) the Stellenbosch Municipality falls in the Cape Town Functional Region. This Functional Region also includes the municipalities Saldanha Bay, West Coast, Swartland, Drakenstein, Theewaterskloof and Overstrand as illustrated in Figure 4-2. It is thus pertinent for integration of planning between the municipalities just listed to ensure that a cohesive transport system is developed.

Figure 4-2: Cape Town Functional Region



The PLTF identifies a long term vision towards 2050 for the province which will see the creation of a transport system that is built on the pillars of sustainability, equity, access to opportunity in an economically efficient manner and safety. Furthermore; a transport system that is fully integrated with land use is envisioned, that is supported by appropriate densities in the land-use matrix, that encourages densification along strategic commuter corridors and that does not encourage urban sprawl.

4.3 WESTERN CAPE PROVINCIAL SPATIAL DEVELOPMENT FRAMEWORK

The section is based on the Western Cape Provincial Spatial Development Framework of 2014. The PSDF sets the precedent for all spatial planning and development in the Western Cape Province and is based on the following guiding principles:

- Spatial justice
- Sustainability and resilience
- Spatial efficiency
- Accessibility
- Quality and livability

A provincial vision for spatial development is identified which is built on *OneCape 2040's* vision of a *"highly-skilled, innovation driven, resource efficient, connected, high opportunity and collaborative society."* This vision is formed around 6 themes namely; Educating Cape, Working Cape, Green Cape, Connecting Cape, Living Cape and Leading Cape. These themes are explained in Figure 4-3.

Figure 4-3: Key Transitions (2012 - 2040) as per OneCape 2040 Vision

TRANSITION	FROM:	TO:
SETTLEMENT TRANSITION (LIVING CAPE)	Unhealthy, low access, often alienated, low opportunity neighbourhoods	Healthy, accessible, liveable, multi-opportunity communities
ECONOMIC ACCESS TRANSITION (WORKING CAPE)	Factor and efficiency-driven economy with high barriers to entry and low productivity and entrepreneurship	Innovation-driven economy with low barriers to entry, high productivity and entrepreneurship
ECOLOGICAL TRANSITION (GREEN CAPE)	Unsustainable, carbon-intensive resource use	Sustainable, low-carbon resource use
CULTURAL TRANSITION (CONNECTING CAPE)	Barriers to local and global connectivity (language, identity, distance, parochial attitudes)	High level of local connectivity and global market fluency
KNOWLEDGE TRANSITION (EDUCATING CAPE)	Unequal variable quality education plus limited innovation capacity	High-quality education for all plus high innovation capacity
INSTITUTIONAL TRANSITION (LEADING CAPE)	Defensive, adversarial structures	Open, collaborative systems

In an effort to address the spatial challenges identified in the PSDF the following goals have been identified:

- Greater productivity, competitiveness and opportunities in the provincial space-economy;
- More inclusive development of its urban and rural areas;
- Strengthened resilience and sustainability of its natural and built environments; and
- Improved effectiveness in the governance of its urban and rural areas.

4.4 STELLENBOSCH MUNICIPALITY INTEGRATED DEVELOPMENT PLAN

The Stellenbosch IDP acts as the principal strategic informant for development within the municipal area and consequently sets the guiding principles for both the Stellenbosch SDF and CITP. This section is based on the Draft IDP 2015/16 hence any fundamental changes made in the Final IDP should be incorporated in the next annual revision of the CITP.

The IDP describes the vision for the Stellenbosch Municipality as "The Innovation Capital of South Africa." This vision is structured around five themes as illustrated in Figure 4-4.

Figure 4-4: Overarching IDP Strategy

Of particular importance to the SDF are the themes ***Dignified Living, Preferred Investment Destination and Greenest Municipality***. The SDF should therefore respond to these strategic focus areas in a smart way that will guarantee the realisation of the associated goals.

- ***Dignified Living:*** Spatial development plans should aim to eliminate the effects of Apartheid planning principles through eradication of barriers between communities, basic services and employment opportunities. Developments should be human-centered rather than automobile-focused so as to create livable and accessible communities.
- ***Preferred Investment Destination:*** Land use and zoning schemes should facilitate economic growth in order to capitalise on private investments.

- ***Greenest Municipality***: Urban sprawl should be discouraged through fixing the urban edge. Developments should also be sustainable and adopt Green Design Principles so as to reduce the carbon footprint of the Municipal Area. Development should be densified and non-motorised travel encouraged as an alternative to private vehicle travel for short trips.

4.5 STELLENBOSCH MUNICIPALITY SPATIAL DEVELOPMENT FRAMEWORK

This section of the report is based on the Council approved 2013 Stellenbosch Municipality SDF which is currently being updated. It is recommended that the next annual review of the CITP include an analysis of the updated SDF and its effects on the transportation system.

The SDF sets out binding principles to guide development and developmental rights of property owners. It particularly aims to:

- Achieve shared and inclusive growth
- Increase access to opportunities, particularly for disadvantaged citizens
- Improve sustainability by minimising ecological footprints
- Maintain the unique sense of place of the towns and region

A number of strategic perspectives have been identified to give effect to development that safeguards the resource base on which its economy depends, the beauty of the municipal area and the sense of place that is valued by local inhabitants and visitors. These strategic focus areas are as follows:

- Interconnected nodes
- Car Free Living
- Inclusive Economic Growth
- Optimal Land Use
- Resource Custodianship
- Food and Agriculture
- Heritage

Of the above strategies, ***Interconnected Nodes, Car Free Living, Optimal Land Use and Heritage*** have specific relevance for the integrated transport plan.

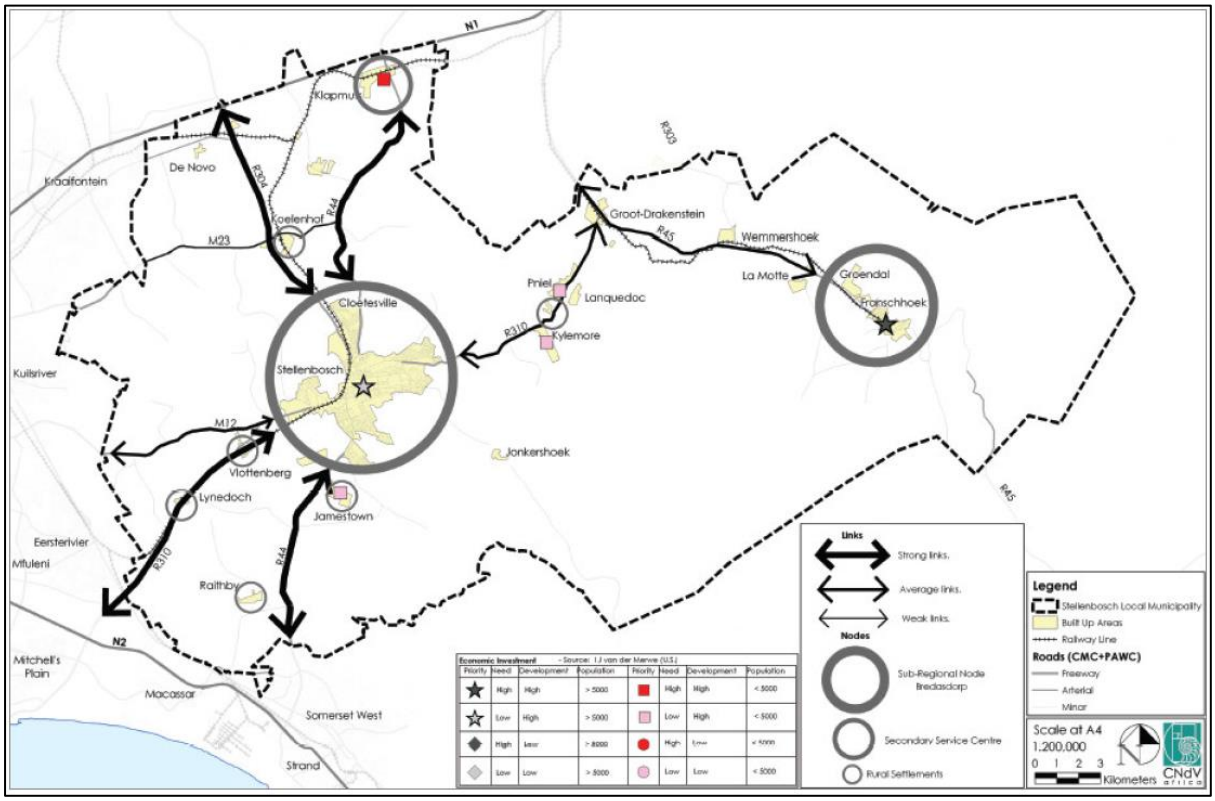
Interconnected Nodes:

Historically the greater Stellenbosch region was developed through locating settlements along tactical transport and river systems. Effort should be made to continue this trend; however urban sprawl should simultaneously be hindered through introducing a strictly defined urban edge. This will discourage recent development trends which have seen the introduction of unplanned informal settlements and low-density residential areas that are

isolated from the transport system. This has the coupled effect of placing pressure on ecosystems and increased private car travel and congestion inter alia.

It is therefore strongly encouraged that new developments incorporate principles of walking distance, functional integration and socio-economic integration. New developments should primarily be concentrated around the rail network and secondly alongside the existing road network. Figure 4-5 depicts the Stellenbosch settlement nodes that are connected by the road and rail networks.

Figure 4-5: Stellenbosch Settlement Nodes Connected by Road and Rail Networks



Car Free Living:

The Stellenbosch Municipal area has seen a significant growth in congestion levels over the past few years, with particular concentration around the town of Stellenbosch. This poses negative impacts on the environment and travel times and consequently on economic productivity levels and growth of the region – a deterrent for potential investors. It is therefore suggested that measures to reduce the number of cars on the road are implemented such as the development and promotion of non-motorised transport and public transport. This will be achieved through development policies that accommodate and encourage NMT use. The SDF specifies that at least 50% of activities found in urban areas be within 1km of residential areas. Furthermore, settlement densities should be support the financial viability of public transport.

Optimal Land Use:

The SDF reports that Stellenbosch is facing a shortage of approximately 20 000 housing units for which there is limited space available to meet this need. In response to this constraint it was suggested that brownfield development be encouraged to build high density housing. Sites located close to public transport nodes are strongly favoured. Land use alternatives developed should be aligned to the transport system and similarly the transport system should facilitate the desired growth. Principles advocated in the Transit Oriented Development Strategy for Stellenbosch is therefore strongly encouraged.

Heritage:

The Stellenbosch functional region is renowned for its beauty and strong heritage features such as its preserved architecture and rampant biodiversity. Whilst every effort should be made to conserve the heritage of Stellenbosch, this also poses constraints to the transport system in terms of its impacts on possible network extensions and providing efficient and accessible NMT routes.

4.6 DEVELOPMENT PROPOSALS

Following the development principles, development proposals around 14 nodes within the municipal area were presented based on analysis of the structuring axes as illustrated in Figure 4-6.

These nodes identified for development are listed below and illustrated in Figure 4-7.

- Stellenbosch Town
- Franschhoek
- La Motte
- Wemmershoek
- Groot Drakenstein
- Dwars River Valley
- Klapmuts
- Muldersvlei Crossroads
- Koelenhof
- James Town/ De Zalza
- Vlottenberg
- Spier
- Lynedoch
- Raithby

Figure 4-6: Composite View of Structuring Axes

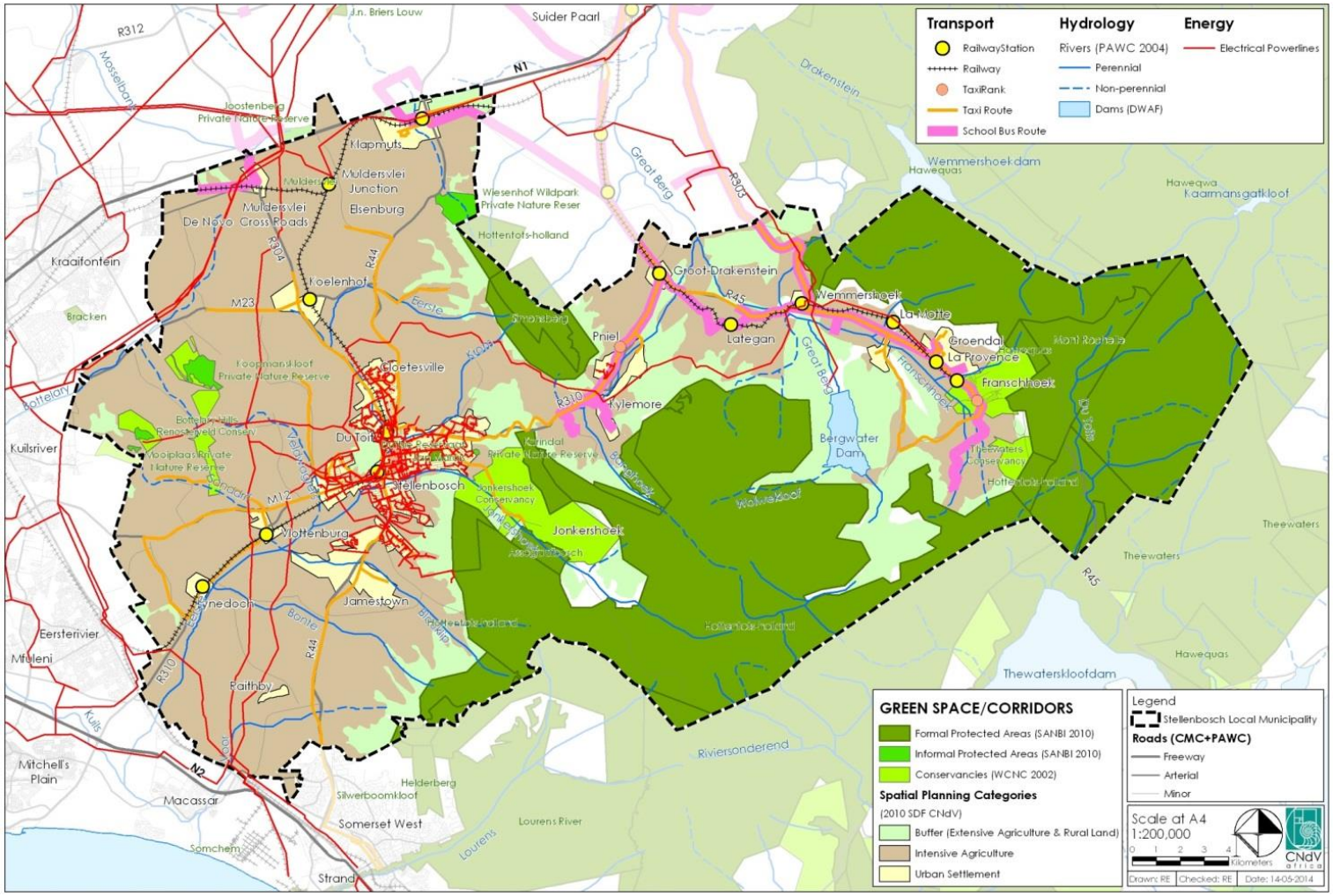
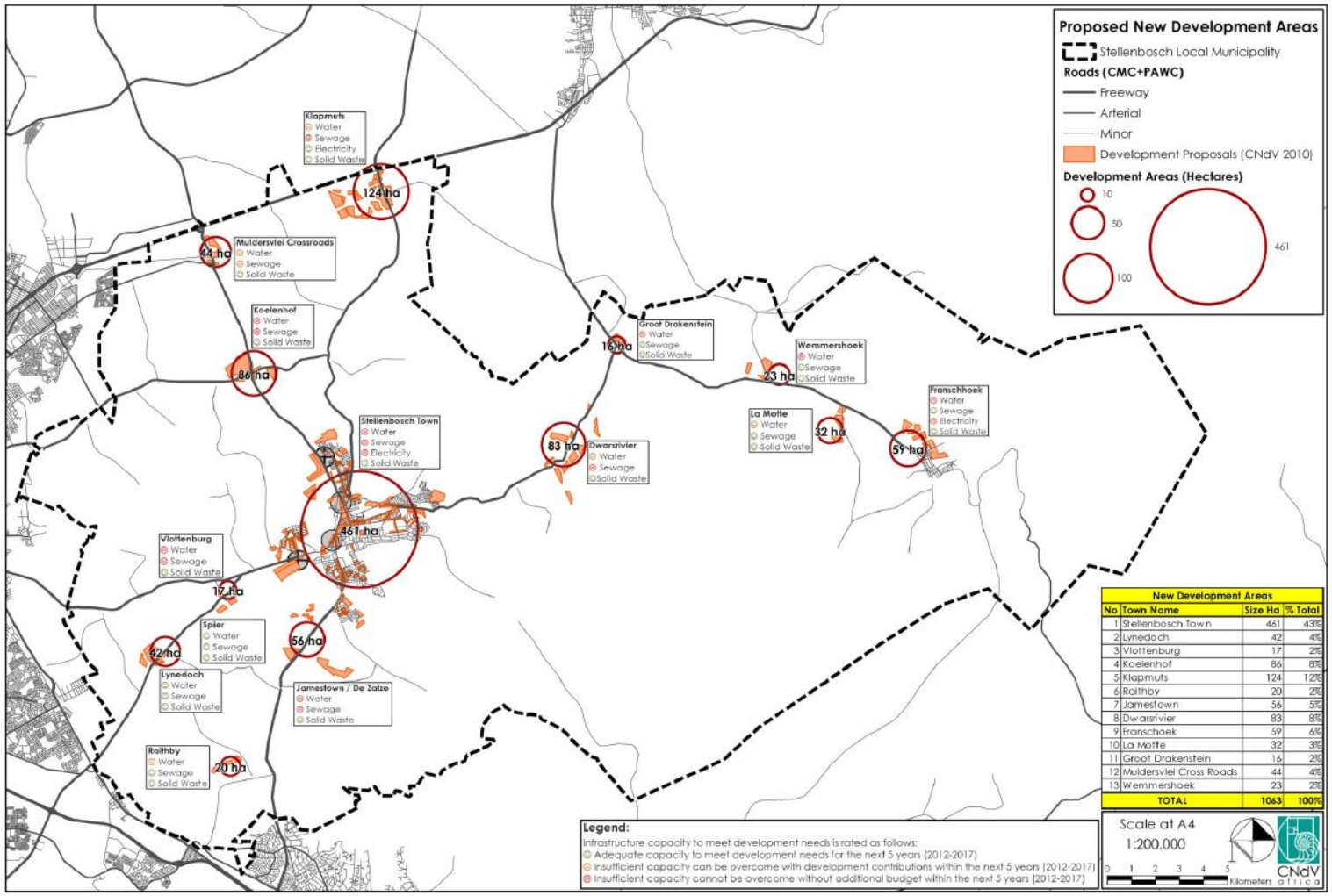


Figure 4-7: Proposed New Development Areas



4.7 IMPLICATIONS FOR TRANSPORT

The strategies identified in the SDF provide a clear direction for what needs to be addressed in the Comprehensive Integrated Transport Plan. The following items need to be considered in the transport plan:

- The transport system in the Stellenbosch Municipality needs to be assessed against the increased densities projected in the SDF to determine whether the present system will be able to support such growth. The projected growth may call for increased road corridor capacities, public transport linkages along with cycling and walking facilities.
- Transport principles such as Transit Oriented Demand (TOD) and Transport Demand Management (TDM) and the analysis of network operations to improve traffic flow should be adopted in an effort to reduce congestion of the road network as this negatively impacts economic growth and the "greenness" of the Municipality.
- The transport plan should encourage the development of NMT infrastructure and networks to reduce the demand for private car travel and improve the livability of neighborhoods and communities within the area.
- The rail system should remain the backbone of the transport system in the functional region so rail capacity and infrastructure maintenance should receive attention in the transport plan.

5. TRANSPORT NEEDS ASSESSMENT

SYNOPSIS:

- The Transport Needs Assessment provides a summary of the needs for new or improved transport services or infrastructure identified through an analysis of information collected, strategies for the development of Stellenbosch and through the consultation process.
- The following key needs were identified for inclusion in the CITP strategies:
  - The need for a high quality, sustainable public transport system
  - The need to improve accessibility to transport for Learners and persons with disabilities
  - The need to improve facilities for cycling in Stellenbosch as well as the surrounding, smaller settlements and rural areas
  - The need to improve mobility on the major road network by reducing congestion by the provision of alternative routes and corridors, where possible and the provision of NMT facilities.
  - The need to identify and source additional funding to implement plans included in the CITP
- The needs of the community were identified through a public consultation process. This information was used to identify projects, new or existing, that can be included in the CITP budget.

5.1 INTRODUCTION

This chapter summarises the transport needs in the Stellenbosch Municipality that arise from a comparison of the Transport Register (Chapter 2) and the proposed future development scenarios presented in the Stellenbosch Spatial Development Framework (Chapter 4) as well transport needs identified in the other Chapters of the CITP.

5.2 INTERPRETATION OF THE TRANSPORT REGISTER

5.2.1 Overview

The population of the Stellenbosch Municipality is of the order of 160 000 (Statistics, SA – 2011) the majority (76%) of whom live mainly in the towns of Stellenbosch, Pniel, Klapmuts and Franschhoek. A high percentage (24%) of the population falls into the 25 to 64 age group and 12% into the 15 to 24 age group. The high percentage of the 20 to 30 age group provides an opportunity to increase the use of public transport and non-motorised transport provided that the appropriate services and facilities are provided. These modes of transport are environmentally friendly and as such should be attractive to the “young” over the private

car. These modes should be promoted by providing features such as free internet and live information such as route information and timetables.

The income distribution in Stellenbosch indicates that over half the population are not economically active. There is thus a need to provide “social” or low cost public transport to this sector to increase accessibility to educational and economic opportunities.

5.2.2 The Public Transport System

The public transport system consists of a passenger rail system, informal minibus taxi services, a bus service between Stellenbosch and Somerset West and bus services for scholars.

The following are the key characteristics and needs of the public transport system in Stellenbosch:

- The passenger rail system through Stellenbosch consists of a single track that is currently operating at 70 – 80% utilisation.
- Maintenance and minor works has been undertaken at stations however there are no major upgrades planned.
- There has been an average growth in the utilization of passenger rail of 6 – 7% between 2007 and 2012 (this needs to be verified by conducting new surveys)
- The Stellenbosch and Du Toit Stations are not ideally located and it is proposed to relocate them to positions where better use can be made of the potential of the surrounding land uses.
- The bus service provided between Stellenbosch and Somerset West is limited and there are no scheduled bus services between Stellenbosch and other destinations in the Cape Town area such as the Airport and Belville.
- The minibus taxi services operate on several closely spaced routes that compete with each other and are possibly inefficient. Most routes are 100% utilised.
- The minibus taxi services do not operate on a schedule and are not subsidised.
- There is an overall lack of passenger facilities on minibus taxi routes and at some stops and ranks there are no facilities at all.
- The Bergzight Minibus Taxi Rank is unsafe for commuters resulting in many potential public transport users turning to alternative modes.
- There are no formal facilities for long distance bus services.
- The public transport system, with the possible exception of rail, is not universally accessible.
- There is no transportation service available for Special Needs Passengers to use and the current NMT network is inaccessible to these passengers.

5.2.3 The Private Transport System

The following are the key characteristics and needs of the private transport system:

- Severe traffic congestion occurs on the critical section of the R44 (Main Road 27) from Dorp Street to Bird Street – R310 (Main Road 174).
- Critical intersections on the R44 (Main Road 27) need to be upgraded to improve traffic (and pedestrian) safety.
- A network of attractive cycle and pedestrian infrastructure needs to be implemented to contribute to the reduction in the use of private cars, to improve safety and reduce the impact on the environment.
- Traffic calming projects need to be implemented in residential areas to improve safety.
- Provision of parking in the town of Stellenbosch is limited and expensive therefore introduction of remote parking garages should be investigated, which will have the coupled effect of encouraging NMT and public transport use for the remainder of the trip.
- The majority of students enrolled at the University of Stellenbosch use the private motor vehicle to travel to the campus. This adds to the congestion experienced in the town and the shortage of parking. Measures to discourage use of the private vehicle by students should be explored in collaboration with the University.

5.2.4 Cycling and Walking

Cycling and walking (NMT) are considered by many as the solution to Stellenbosch's traffic problems. The following is a list of challenges currently present in the NMT system:

- The town of Stellenbosch has a large number of potential NMT users due to the high percentage of students attending the University who live within close proximity to the campus; but still prefer to use a car.
- The town of Stellenbosch has many heritage features such as streams and huge trees which create barriers for seamless NMT movement and also impede on the universal accessibility of the system. NMT infrastructure needs to be improved in a manner that will support the preservation of the heritage features in the town.
- There is a general lack of NMT facilities in the suburbs on the outskirts of the Stellenbosch town and in the rural towns of the municipality. There is also poor NMT connectivity between the different suburbs forcing NMT users to use the mobility routes where they are exposed to high speeds and potential accicents.
- Sidewalks in the town of Stellenbosch are quite narrow to accommodate the envisaged pedestrian flows and do not meet Universal Access requirements. Sidewalks are also cluttered by poorly positioned street furniture, sidewalk

cafés, trees, etc. making it very difficult to navigate and further reducing the effective width.

- There is a very strong pedestrian desire line from the township of Kayamandi, over the railway line at the Kayamandi Mall. This crossing is informal and a serious safety hazard. PRASA must be approached to provide a safe crossing facility (pedestrian bridge or underground passage).
- Should the TOD proposals be adopted, NMT links between the TOD node and the town CBD will have to be very strong to support the successful realisation of this development.
- Political support for NMT proposals such as pedestrianisation of streets in the CBD area is necessary to ensure future investment in NMT infrastructure.

5.2.5 Budget and Finance

The need for the funding of projects included in the CITP include:

- The identification and sourcing of additional funds to implement an upgraded, integrated public transport system.
- Funding to reduce backlogs and funding to implement the maintenance of all transport infrastructure.
- Funding to implement basic levels of services in disadvantaged areas.

5.3 PUBLIC PARTICIPATION AND STAKEHOLDER FEEDBACK

A series of workshops and meetings has been held with various stakeholders to identify transport needs and issues. These are summarised as follows:

5.3.1 Workshop on Transport Vision: 24 April 2015

- Improvements or new public transport facilities are required in some areas e.g. Klapmuts.
- Public transport routes need to be extended in some areas to provide a better service coverage to the community.
- Develop an education and awareness campaign on traffic safety, and engage with all local communities / settlement areas.
- Incentivise modal shifts away from use of individual cars.
- The budget deficit must be acknowledged and the proposed strategies should be framed in such a manner that they can be implemented in sections or increments, yet still achieve the long term desired outcome.
- Infrastructure should incorporate people with ‘special needs’. Special Needs Passengers (SNPs) includes not only those that are disabled, but the fragile and elderly, young children, cyclists pregnant women, and parents with prams, health problems, etc.

- Implement the proposed Transit Oriented Development (TOD) railway station relocation and development plans.
- The traffic congestion problem at the intersections on the R44 must be addressed.
- The long term plan to create a dedicated lane for buses on the R44 must be investigated.
- Infrastructure should be implemented that supports modal shift away from cars e.g.; NMT infrastructure within the town centre as well as linking communities to the town centre.
- Capitalise on the existing rail infrastructure and expand rail capacity, linking and synchronising this with NMT, public transport and lastly individual cars.
- Increased and improved infrastructure for taxi services to improve the service offered and to expand the service.
- A freight management policy should be developed.
- Learner transport needs must be considered.
- The WCG plans to build roads that do not align with the Municipality's density and mobility plans – in particular the Western Bypass is considered to be a conflicting plan.
- The biggest issue in Franschhoek is freight. The Municipality must plan freight routes, mobility routes and economic routes. Alignment of these plans must take place with Province or vice versa. The economic viabiloity of freight on the Franschhoek pass must be investigated by the WCG.
- The challenge of long term land use planning must be addressed, especially with reference to the NDP and SIPs. Some of these plans may not fall within the municipal boundary, but the consequences (e.g. increased traffic or freight transport through Stellenbosch) may have direct consequences for the Local Municipality.

5.3.2 Public Meeting: 15 October 2015

- Expand facilities (e.g. ranks, embayments, shelters) for minibus taxis
- Support minibus taxis to expand the services offered
- Implement a local scheduled public transport service (e.g. bus service)
- Improve rail services from neighboring municipalities
- Build new roads to provide alternative routes and relieve congestion
- Create more parking in the Stellenbosch CBD
- Build more cycling and walking routes
- Improve street lighting and security on cycling and walking routes
- Improve security on existing public transport (minibus taxis and trains)

- Improve freight facilities
- Provide universally accessible transport infrastructure
- Improve road safety
- Need for integrated land use and transport planning

5.3.3 Comments from Interested and Affected Parties

Comments on the draft CITP have been received from several organisations including the Stellenbosch Ratepayers Association and the Franschhoek Trust and Ratepayers Association. The latter has referred to the recommendations of the Franschhoek Transport Plan, prepared by the Stellenbosch Municipality in 2011 which should be taken into consideration in the plans and budgets of the current CITP. The Transport Plan made several recommendations for the implementation of specific projects in Franschhoek. For purposes of budgeting, these projects have been categorised as follows:

- Public transport facilities
- Non-motorised transport facilities
- Road Safety Audits
- Road improvements and traffic calming
- Road maintenance
- Parking

Projects falling into the above categories have been included in the CITP budget in section 12 of this document.

5.4 INTERPRETATION OF THE SPATIAL DEVELOPMENT FRAMEWORK

The Stellenbosch Municipality Spatial Development Framework sets out principles to guide development. The following transport related matters have been highlighted as a part of the Framework:

- Existing development should be densified and non-motorised travel encouraged as an alternative to private vehicle travel for short trips.
- New developments should incorporate principles of easy walking distances, functional and socio-economic integration.
- New developments should primarily be concentrated around the rail network and secondly alongside the existing road network.
- Measures to reduce the number of cars on the road network should be implemented such as non-motorised transport and public transport.
- Brownfield development should be encouraged to increase densities close to public transport nodes.

- Land development should be closely aligned to the transport system and Transit Oriented Development should be strongly encouraged.
- The conservation of the heritage of Stellenbosch constrains the development of the transport system in terms of the extension of the network and the provision of accessible transport routes.
- Nodal development proposals and increased densities may require increased road corridor capacities and improved public transport linkages.
- Transport principles such as Transit Oriented Development (TOD) and Transport Demand Management (TDM) should be adopted in an effort to reduce congestion of the road network as this negatively impacts economic growth and the "greenness" of the Municipality.
- The transport plan should encourage the development of NMT infrastructure and networks to reduce the demand for private car travel and improve the livability of neighborhoods and communities within the area.
- The rail system should remain the backbone of the transport system in the municipal region so rail capacity and infrastructure maintenance should receive attention in the transport plan.

5.5 SUSTAINABILITY FRAMEWORK

Table 5-1 below contains a summary of the main needs identified in terms of the four Integrated Development Plan Goals that encapsulate the objectives of the CITP:

Table 5-1: Summary of Needs in terms of IDP Goals

Preferred Investment Destination	Dignified Living	Safest Valley	Greenest Municipality
Relocate the Stellenbosch and Du Toit Stations as a part of the TOD proposals	Improve passenger rail infrastructure and services and promote the use of rail services to and from Stellenbosch	Upgrade the road network to improve safety at critical locations	Infrastructure should be implemented that supports modal shift away from cars e.g.; NMT infrastructure within the city centre
Introduce measures to reduce severe traffic congestion on the main road network	Improve road based public transport services and facilities and rationalise the system to improve efficiency and reduce costs	Develop an education and awareness campaign on traffic safety, and engage with all local communities / settlement areas	Reduce the number of private cars and implement non-motorised transport and public transport infrastructure.

Preferred Investment Destination	Dignified Living	Safest Valley	Greenest Municipality
A freight management policy should be developed	Provide universally accessible public transport services and facilities throughout	Improve the safety and security of public transport and NMT users at transit facilities and en route to destinations	The conservation of the heritage of Stellenbosch constrains the development of the transport system in terms of the extension of the network and the provision of accessible transport routes
Densify development around transport nodes	Source funds to implement and upgrade the public transport network		
Land development should be closely aligned to the transport system and Transit Oriented Development should be strongly encouraged	Funding to reduce backlogs and funding to implement the maintenance of all transport infrastructure		
Provide an attractive choice of modes to the individual	Funding to implement basic levels of services in disadvantaged areas		
	Learner Transport Needs must be considered		
	Provide a quality alternative mode of transport to the private motor vehicle		

5.6 MEASURES TO ADDRESS PRIORITY NEEDS

5.6.1 Measures to Promote Public Transport

The Stellenbosch Municipality is planning the implementation of an integrated public transport system with the objectives of providing a:

- Sustainable system that is of high quality and accessibility to all sectors
- Integrated system with inter-connectivity and co-ordination between modes
- Equitable system that meets the basic needs of all for transport
- Cost effective system

The proposed public transport system will be branded and promoted to attract users that currently use their private cars.

The proposed public transport system will be served by upgraded infrastructure (stops and terminals) and special traffic arrangements at intersections to give public transport a travel time advantage over private cars.

An affordable ticketing system for public transport is proposed.

As a part of an overall Transit Oriented Development strategy to reduce traffic congestion, it is proposed to encourage development at rail stations in Stellenbosch. PRASA must be approached with a view to relocating and redeveloping rail stations and improving train services to attract additional patronage. Passenger train services between Stellenbosch and destinations such as Cape Town and Eerste Rivier should be improved.

5.6.2 The Needs of Learners and Persons with Disabilities

The needs of learners for public transport services must be determined by means of surveys to assess the number of trips and routes travelled. Public transport services and routes will be planned to serve the demand as a part of the proposed integrated public transport system.

A universal access policy has been developed for Stellenbosch with a view to ensuring that public transport services and facilities as well as NMT infrastructure are made universally accessible.

5.6.3 Non-Motorised Transport (NMT)

The Stellenbosch Municipality has prepared a Non-motorised Transport Policy (2015), a NMT Network Plan and a Cycling Plan for the development of a network of sidewalks and cycle tracks. These two network plans must be integrated to ensure cohesion and maximised benefit in NMT infrastructure provision. In future planning for pedestrian and bicycle networks should not be done in isolation as this contributes to the development of poorly integrated networks. Future investigations should also consider provision of pedestrian infrastructure other than alongside existing roads as the latter does not accurately consider pedestrian desire lines. Projects for the construction of the network have been included in the budget for the implementation of the CITP.

In addition to the survey done in 2015, a further behavioural survey or study should be undertaken, if considered necessary, in the town of Stellenbosch to establish and quantify the deterrents to NMT use and to inform NMT plans and policy going forward if NMT use is to be successfully encouraged.

Pilot studies on how to improve NMT use in Stellenbosch should be considered.

Development plans should be regulated to ensure that adequate consideration of NMT needs and facilities is made. End of trip facilities such as showers, lockers and secure lock-up facilities should be included in new development or refurbishment policies.

Campaigns should be developed to change the perception of NMT as a mode for the poor but rather as a mode for the informed, considerate and environmentally aware. This is especially needed at the University and could be a potential research study. If the attitudes of the residents of Stellenbosch change then NMT proposals will be better received by the public. This could be an alternative approach to trying to gain political buy-in first.

Consideration of NMT needs and facilities in the rural towns of Stellenbosch should receive more attention. These communities have poor facilities, if present at all, and the vast majority are dependent on NMT modes for daily travel. Therefore if the Municipality is to create "dignified living" environments for its people; this is an absolute must.

5.6.4 Private Transport

A Roads Masterplan has been developed for Stellenbosch which proposes road network solutions to current traffic congestion problems and to provide road capacity for future development in the municipal area. The road network plan is currently being reviewed to develop additional options and solutions.

The Western Cape Government is implementing improvements to provincial roads in the Stellenbosch Municipality to improve safety and increase road capacity as well as road maintenance projects.

A Travel Demand Strategy is being developed under this CITP to find alternative ways of encouraging private car users to use alternative modes of transport.

The Stellenbosch Municipality has prepared a report on transport user choice under their Large Employer Trip Reduction Programme with the objective of reducing travel by private car through measures such as the introduction of a car sharing scheme and the increased use of non-motorised transport.

5.6.5 Travel Demand Estimation

In 2010 the Stellenbosch Municipality prepared a transport demand model using the EMME/3 model developed by the City of Cape Town. The model was based on an extensive data collection exercise, including a household survey. The model was used to test various road network alternatives and to prepare a basic public transport system.

No new surveys have been carried out and it is proposed to use the 2010 model, with appropriate growth factors, in the preparation of the current CITP.

6. PUBLIC TRANSPORT OPERATIONAL STRATEGY

SYNOPSIS:

- The Stellenbosch Municipality, *as a Planning Authority*, is responsible for transport functions in terms of the National Land Transport Act (5 of 2009) including the planning and implementation of an efficient and affordable public transport service network and travel corridors
- There are several implications stemming from this responsibility that the Stellenbosch Municipality must consider. These are:
  - Financial implications: The cost of planning, infrastructure provision, purchase of vehicles, operation and maintenance
  - The necessity for consultations and negotiations with role-players on issues such as empowerment, training, compensation for loss of jobs or profits, negotiation of operating contracts
  - Municipal capacity to plan and monitor the system
  - The need for a clear procurement strategy
- The elements of an upgraded public transport service network are:
  - An integrated route network of short and long distance routes
  - New universally accessible vehicles (initially using existing vehicles)
  - Integration of rail, bus and minibus services on fixed timetables
  - A new and integrated ticketing system
  - Contracted operators (negotiated contract with existing operators)
  - New transport infrastructure : terminals, shelters
- Guiding principles for the proposed Stellenbosch public transport service network are:
  - Compliance with the Department of Transport guidelines for a Public Transport Network Grant and the Provincial Public Transport Institutional Framework
  - Transformation and upliftment of the public transport industry
  - To improve public transport services and quality of life of residents
  - Phased development of the public transport system
  - Financial sustainability

6.1 INTRODUCTION

6.1.1 Background and Context

The Stellenbosch Municipality is a part of the Cape Town functional region and is largely semi-rural in nature with higher development densities located in the towns; Stellenbosch, Franschhoek, Klapmuts and Pniel. Urban growth is concentrated in Stellenbosch with several new housing estates being developed and gradual expansion of academic facilities. As a result, traffic volumes have increased rapidly and there is high car ownership within the higher income sector. Commuter traffic within and through Stellenbosch has increased to the extent that there is traffic congestion at the main intersections and a general shortage of parking.

Public transport is currently provided primarily by the minibus taxi industry that serves all areas within Stellenbosch, with links to the smaller surrounding settlements. There is a limited bus service between Stellenbosch and Somerset West and special tourist bus services. The minibus taxi public transport services are characterised by a plethora of closely spaced routes serving common destinations and a high incidence of unlicensed, informal services acting in competition with licenced operators. A passenger rail service is in operation between Stellenbosch, Paarl and Cape Town.

Further information on the existing public transport system can be found in Chapter 3.

The Stellenbosch Comprehensive Integrated Transport Plan, 2011 proposed a rationalised public transport system for Stellenbosch and a conceptual, road-based public transport system comprising of six routes with a central interchange at the existing Bergzight Terminal. The proposed system was intended to serve the central part of the town with possible expansion to other parts of the municipal area and to adjacent towns in future. It was also proposed to integrate services with the public transport system in Cape Town.

The University of Stellenbosch has initiated a plan to provide dedicated public transport services for students and staff within Stellenbosch and the surrounding areas. The proposed system, which has not been implemented, would operate on a fixed timetable and be free of charge to students and staff.

The Stellenbosch Municipality intends to proceed to the next stage of planning in terms of the implementation of a public transport network, in line with national transport policy.

This 2015 CITP will build on the proposals contained in the previous CITP and further establish broad parameters in preparation for the more detailed planning of a public transport network which will follow.

6.1.2 Implications of Policy and Legislation

The National Land Transport Act (No. 5 of 2009) (NLTA), Section 11, assigns responsibilities to the three spheres of government. While national and provincial government are responsible for transport policy and strategy, the municipal sphere is responsible for developing local policy and strategy within its area based on national and provincial guidelines. Specifically the municipal sphere is responsible for the preparation of an

Integrated Transport Plan and the implementation thereof including the planning, implementation and management of a modally integrated public transport network and travel corridors. Chapter 5 of the NLTA requires that municipalities, as planning authorities, must integrate existing public transport services into the larger public transport system in terms of the Integrated Transport Plan. This can take place through negotiated contracts, subsidised contracts and commercial contracts. Initially negotiations can take place with existing local public transport operators, however other external role-players could be included if this is found to be advantageous. Section 6 of the NLTA requires that existing services be rationalised in this process to achieve a safe, reliable and cost effective public transport system.

While the requirements of national and provincial transport policy are well documented, the implications for municipalities (Planning Authorities) of undertaking the new functions of planning and implementing such a transport system should be carefully considered. Amongst the more challenging aspects are the following:

- Financial implications for municipalities of planning, implementing and maintaining the public transport system: While government subsidies are currently available, the long term financial implications are not certain and municipalities may be required to meet part of the on-going operational and maintenance costs as well as other aspects such as security, marketing, cleansing etc.
- Consultations and negotiations with role-players and the public transport industry: Government has stated that there will be no loss of legitimate jobs or profits when implementing a public transport system. Existing operators must be empowered to participate in the process of negotiated contracts and must be compensated fairly where appropriate. This process necessitates intensive research and negotiations.
- Municipal capacity: In order to manage, monitor and administer the public transport system, the Municipality must undertake new functions internally or must outsource the functions to an external entity. This requires a Section 78 investigation in terms of the Municipal Systems Act to determine the most appropriate mechanism of undertaking the new functions.
- Procurement: The Municipality requires a clear procurement strategy for operating contracts, professional services, design and construction of infrastructure, ticketing system, purchase of vehicles, safety and security amongst many other services. Unless this process is dealt with effectively, severe delays to the project could be experienced.

6.2 STRATEGIC APPROACH

The strategic approach to the planning, design and operation of the Stellenbosch public transport system must be guided by the goals and objectives of the Stellenbosch Municipality and the CITP. The following key aspects must receive consideration.

6.2.1 Sustainable system

The goals and objectives of the CITP (Chapter 2) provide guidance in this respect. The following aspects are characteristic of a sustainable transport system and must guide the implementation process:

- Accessibility & quality
- Multi-modal approach
- Inter-modality
- Interrupt & reverse harmful trends
- Work backward from preferred vision to planning & provision
- Manages transport or mobility demand
- Incorporates “full” costs
- Integrated planning

6.2.2 Integrated System

The public transport system must be truly integrated to provide transport that allows optimal movement between modes and origin and destination in terms of:

- Inter-connectivity between transport routes and modes including rail, private car and non-motorised transport
- Co-ordinated timetables and schedules that allow transfers between routes and modes with a minimum waiting time
- Minimum number or transfers between routes and services to reach a particular destination
- Minimum number of fare transactions between transfers
- Interconnected information systems
- Infrastructure that facilitates smooth transfers between modes and services and provides the appropriate facilities.

6.2.3 Equitable system

The system should strive to avoid destructive competition between modes and provided for fair participation of all in terms of:

- Accessibility for the disabled and pedestrians

- Meet the basic needs of all for transport
- Promote social integration

6.2.4 Cost effective System

The system should strive to be cost effective and efficient in terms of:

- Optimum use of financial resources
- Minimal duplication of services
- Affordable fares

6.3 SPATIAL DEVELOPMENT FRAMEWORK

Chapter 4 of the CITP contains a summary of the Spatial Development Framework approved by the Stellenbosch Municipality Council in 2012. The approach that was adopted was to focus high density development at nodes located at strategic intersections of road and rail networks, or to intensify the development of existing nodes. The settlement nodes connected by road and rail networks are shown in figure 2 of the SDF and are indicated in Figure 6-1.

Figure 6-1: Stellenbosch Settlement Nodes Connected by Road and Rail Networks

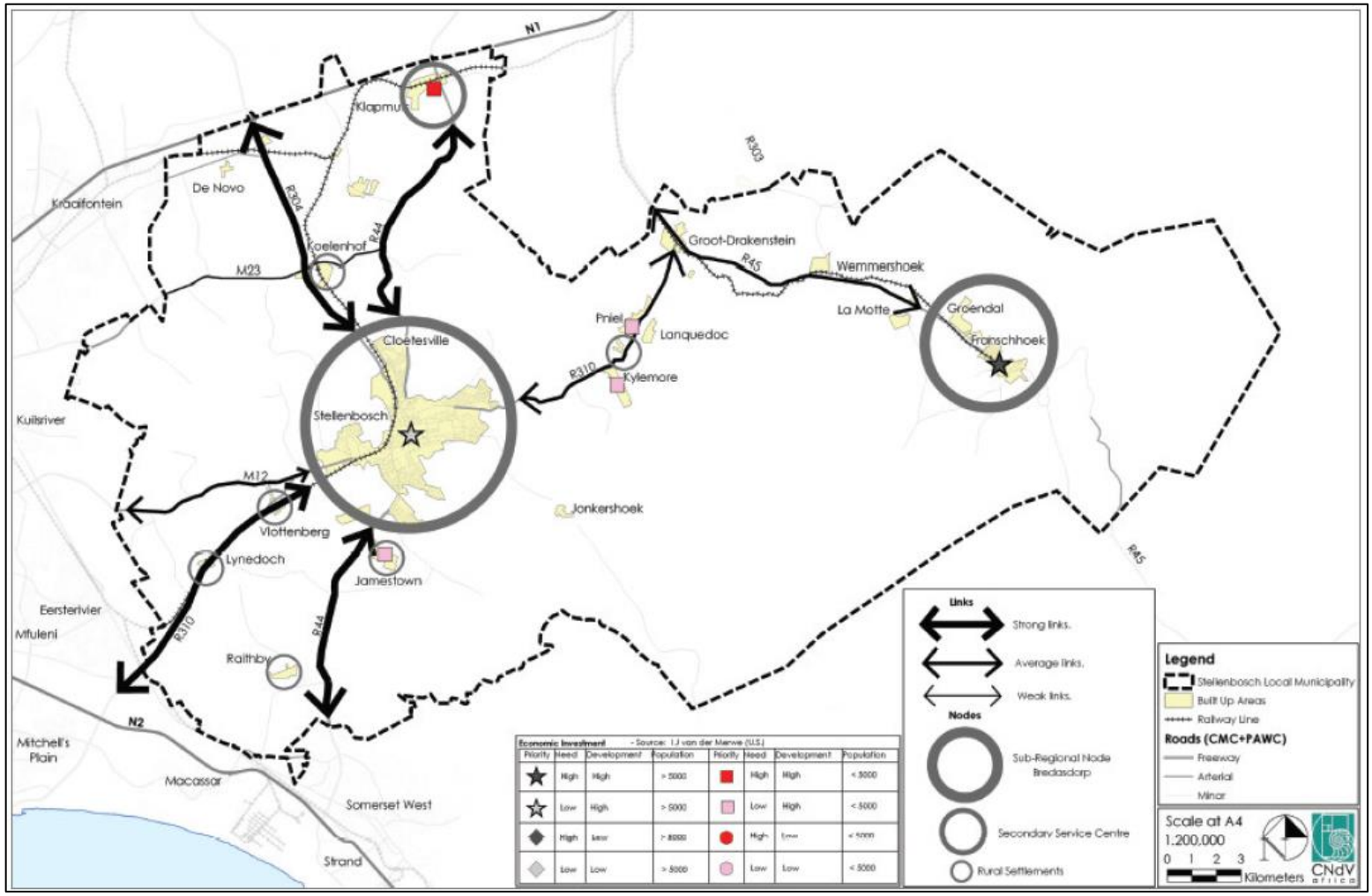


Figure 6-1 indicates the corridors with strong, medium and weak links as well as the sub-regional nodes (Stellenbosch and Franschhoek) and secondary service centres (Klapmuts) which are a high priority for development.

The public transport system should focus on the strong corridors but maintain accessibility on the less important corridors. This may mean that corridors where the travel demand is high will require larger vehicles operating at a high frequency to meet the demand.

The areas further away from the main corridors are mainly rural in nature and cannot be economically served by scheduled public transport services. Longer walking distances from surrounding areas to the public transport routes will therefore have to be accepted or local transport will have to be used to gain access to the nearest public transport route.

6.4 CURRENT PUBLIC TRANSPORT PROPOSALS

6.4.1 Public Transport System for Stellenbosch

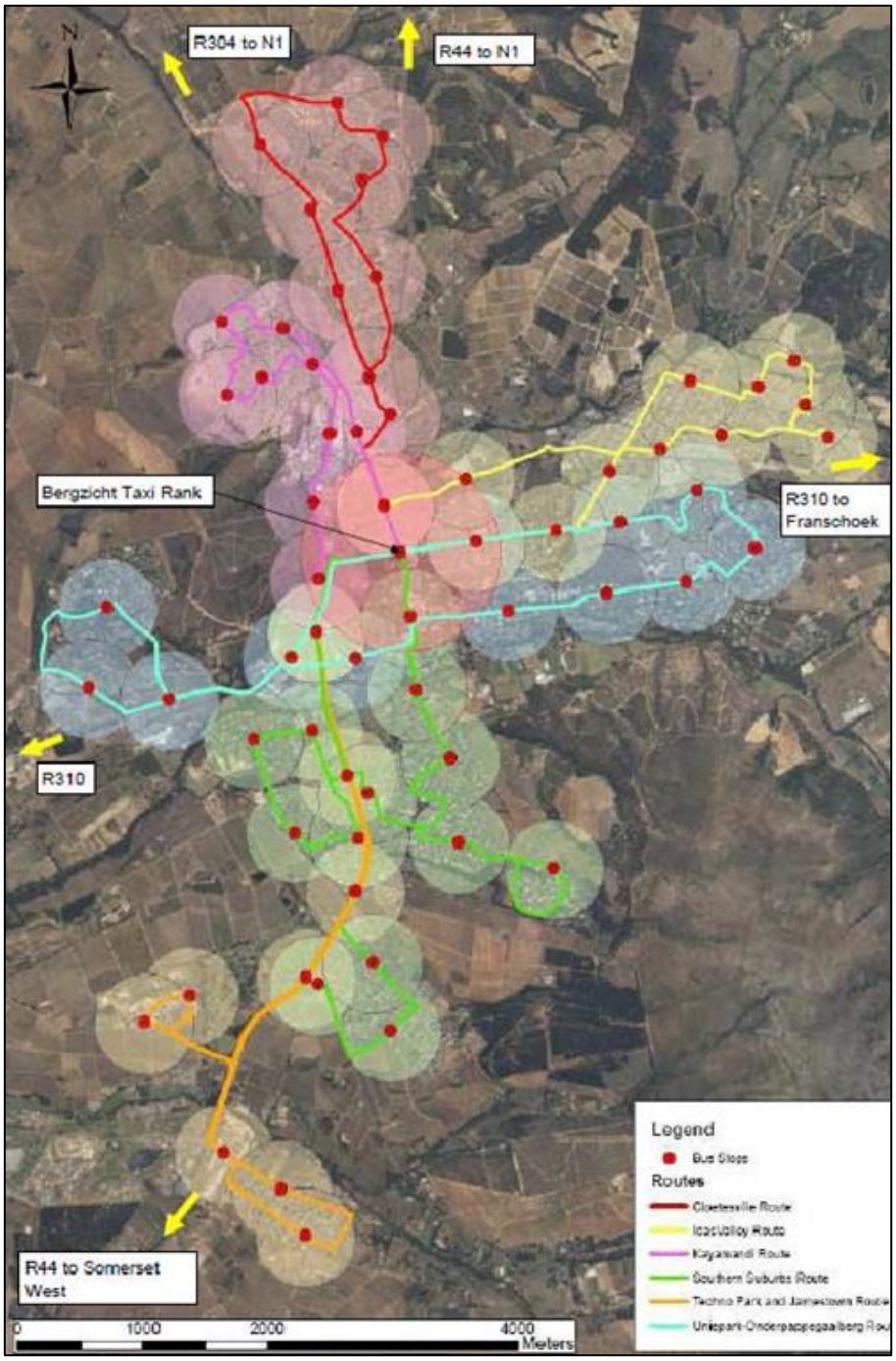
The Stellenbosch Comprehensive Integrated Transport Plan, 2011 proposed a road based, scheduled public transport system, operating on a network of six routes within the Stellenbosch town. The route network proposed is based on a typical “hub and spoke” layout with the existing Bergzight Terminal as the central interchange at which transfers will take place. Further expansion of the route network to other areas is proposed in the future.

The following routes are proposed from the Stellenbosch town centre.

- Kayamandi
- Cloetesville
- Idas Valley
- Southern Suburbs
- Jamestown / Technopark
- Uniepark / Onder Papegaai Berg

The proposed routes are indicated on Figure 6-2.

Figure 6-2: Proposed Public Transport Routes – 2011 CITP



The vehicle fleet proposed consists of a combination of vehicles ranging from a 15 seat minibus to a 60 seat bus with the larger vehicles serving the peak demand. The exact size and mix of vehicles was however not further defined and the proposed system was analysed based on a vehicle size of 45 persons with a varying seated / standing ratio.

The proposed system operates on a fixed timetable with designated stops operating for 18 hours per day (04:00 – 22:00) on weekdays and weekends.

A nominal 400m walking distance is proposed to the nearest stop. This achieves service coverage of approximately 85% of the area.

Table 6-1 indicates the service parameters for the proposed operations calculated using an average travel speed of 30 km/hr and a stop dwell time of 30 seconds. A total of 34 buses, each carrying 45 passengers, will be required to operate the service

Table 6-1: Service Parameters – 2011 CITP

Route	Peak Period Demand Pass / 3- hr	Route Length (km)	Frequency (Minutes)	No. of Vehicles Required (45 Pass. / Veh)
Kayamandi	2 002	7.3	4	6
Cloetesville	1 534	8.6	5	5
Idas Valley	1 242	9.5	6.5	5
Southern Suburbs	Not Available	22	8	7
Jamestown / Technopark	339	17	8	6
Uniepark / Onder Papegaai Berg	Not Available	14.5	8	5

The following proposals are made for the provision of public transport infrastructure:

- The main terminal is located at the Bergzight Terminal
- All bus stops should be indicated by a pole with appropriate signage and a hard standing area. Shelters should be provided.
- An area of land should be identified for a bus depot which would be leased to the operator
- Liaison and consultation is vitally important and the existing minibus and bus operators should be consulted as soon as possible in the planning process. The operators should be empowered with business skills and advice in order that they may form operating companies with which the Municipality can negotiate new operating contracts. Compensation for possible loss of revenue should be negotiated.
- The Stellenbosch Municipality or the Cape Winelands District Municipality are proposed as the contracting authority for the new public transport system. The contracting authority must have the necessary resources to manage, monitor and maintain the transport system infrastructure and related services.
- A pre-loaded smart card system is proposed, with an initial cash based system. The system should be integrated with that of the City of Cape Town to ensure integration throughout the functional region.

- A monitoring system should be implemented to ensure compliance with the terms of the operating contract. This can include a GPS tracking system and CCTV.
- It is important that the proposed public transport system has its own identity and the system should be branded through a consultative process to facilitate marketing.

6.4.2 Public Transport Proposals for the University of Stellenbosch

The University of Stellenbosch has proposed introducing a scheduled public transport service for staff and students operating on a fixed route and stop network in the Stellenbosch Municipal area. It is proposed that the service will be free to the users and would be funded by the University.

Two complementary services are proposed, firstly a shuttle service within the town of Stellenbosch and secondly a long distance service to surrounding suburbs / towns. The proposed routes are as follows:

Shuttle Routes:

- Stellenbosch Railway Station – Uniepark
- Idas Valley – Paradyskloof
- Cloetesville – Brandwacht
- Proposed park-and-ride on the R310 and Coetzenburg

Long Distance Routes:

- Stellenbosch – Gordons Bay
- Stellenbosch – Wellington
- Stellenbosch – Tygervalley
- Stellenbosch – Belville
- Stellenbosch – Eersterivier
- Stellenbosch – Kuilsrivier
- Stellenbosch – Mitchell's Plain

The proposed shuttle and long distance routes are indicated on Figure 6-3 and Figure 6-4 respectively.

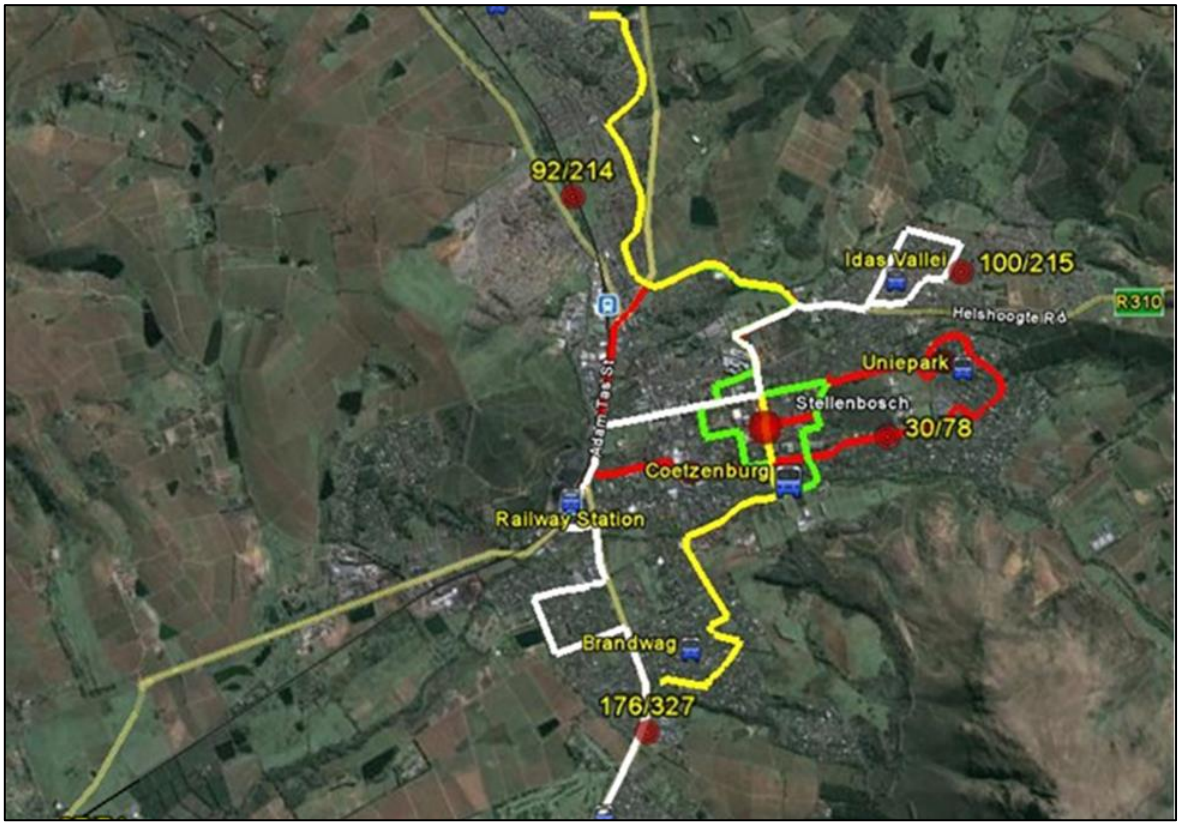
The proposed schedule for the short distance trips is as follows:

- One round trip before 08:00
- 08:00 – 09:00 – Two trips
- 12:00 – 14:00 – Three trips
- 15:30 – 17:00 – Three trips

The long distance trips would depart in the morning from the end destination to arrive in Stellenbosch at 07:15 and depart at 17:30.

A total of 18 buses with a seating capacity of 32 are proposed to run the service.

Figure 6-3: Short Distance Routes

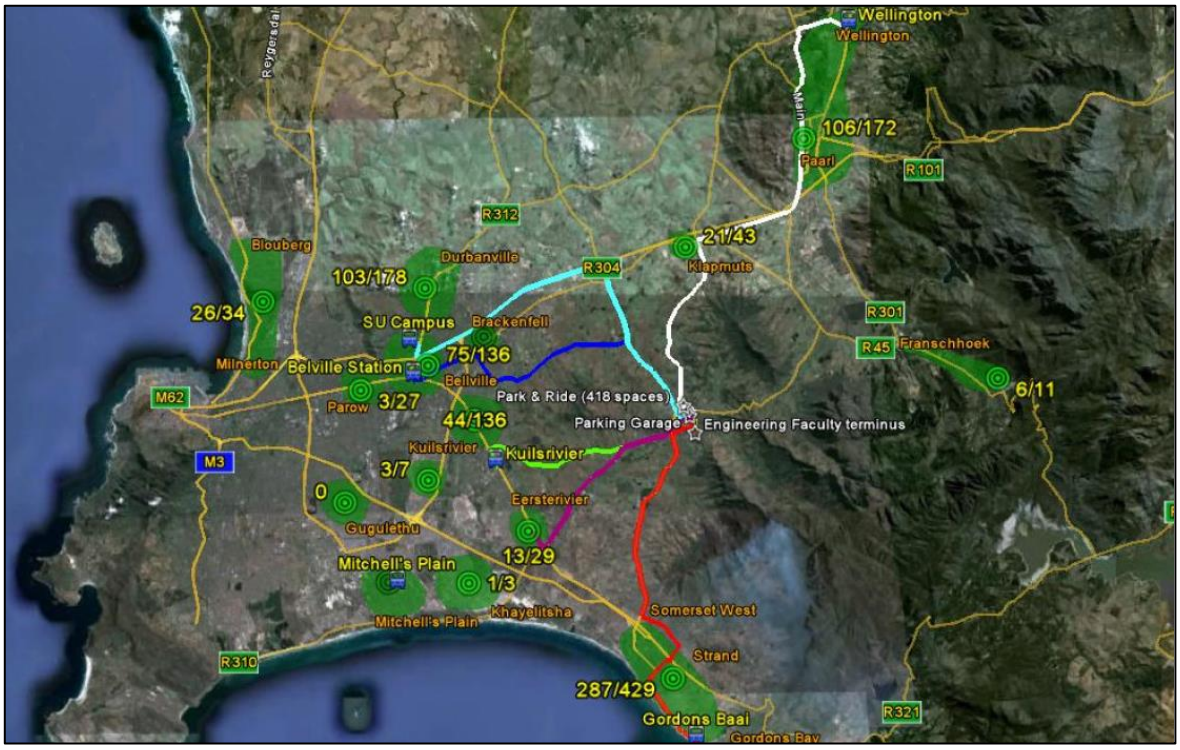


(Source: Google Earth, 2015)

The public transport network proposed by the University of Stellenbosch has to date not been implemented. While the objective of the proposals was to provide staff and students with an alternative to utilisinig their private vehicles, in the absence of a scheduled public transport system in Stellenbosch, it is unlikely that the University will implement the service in parallel to the public transport network proposed by the Stellenbosch Municipality. For this reason the public transport route network (see Section 6.6) has been planned to serve many of the short and long distance routes originally proposed by the University. During the detailed scheduling of services, direct services serving the University can be planned with minimal stops, during peak times. The objective of providing a free, or reduced fare, system for staff and students can be accommodated within the proposed ticketing sysem with concession fares for Learners, subject to negotiations wth the University, schools etc.

This arrangement will render the proposed Municipal public transport system more economically viable.

Figure 6-4: Long Distance Routes



(Source: Google Earth, 2015)

6.5 FRAMEWORK FOR A PUBLIC TRANSPORT SERVICE NETWORK

A Public Transport Service Network should be designed taking local circumstances and resources into consideration. While the implementation of a Bus Rapid Transit system with dedicated public transport lanes and larger vehicles has the benefit of providing a fast and reliable service, it is extremely costly and occupies a large amount of existing road space which is not always available in Stellenbosch, especially in the town centre.

The BRT Planning Guide, 2007 provides the following factors that should be considered when choosing a particular type of public transport technology:

- Cost: Capital cost of infrastructure and property acquisition, operating costs, planning costs
- Planning and management: Planning and implementation time, management and administration costs (e.g. monitoring of operations and contracts)
- Design: Scalability, flexibility, diversity vs. homogeneity
- Performance: Capacity, travel time / speed, service frequency, reliability, comfort, safety, customer service, image and perception
- Impacts: Economic impacts, social impacts, environmental impacts, urban impacts

The following framework for the development of public transport in Stellenbosch takes the above factors into consideration as well as the need for intensive consultation with affected role-players (specifically the existing public transport operators), the requirements of the Department of Transport and the recent initiatives of the Western Cape Government to assist Local Municipalities through the Provincial Public Transport Institutional Framework (PPTIF).

The proposed framework is summarised in the following sections.

6.5.1 Requirements of the Department of Transport

In the "Guidelines and Requirements: Public Transport Network Grant: 2015/2016, for Business Plan preparation underpinning Budget Proposals for MTEF 2016/17 to 2018/19", the Department of Transport sets out the various project types that qualify for investments from the national Public Transport Network (PTN) Grant. These include, not only Bus Rapid Transit systems with dedicated priority infrastructure more appropriate for large cities, but includes support for conventional bus and minibus services (a quality Public Transport Service Network) in smaller cities and towns provided that certain requirements, such as the transformation of the business and operational model, compliance with universal accessibility and operational improvements are introduced.

In the case of the Stellenbosch Municipality, neither the resources nor the space in the historical part of the town of Stellenbosch are available for consideration of a "full" BRT system. It is thus proposed that the latter option be pursued and that a Public Transport Service Network (PTSN) be planned and implemented in stages with the focus on transformation of the existing bus and minibus system, the implementation of an initial pilot phase and an overall phased approach.

6.5.2 Guiding Principles for the Quality Public Transport Service Network (PTSN)

For the purposes of the Stellenbosch Municipality, Comprehensive Integrated Transport Plan, the proposed quality Public Transport Services Network is defined as follows:

"The transformation of conventional bus and minibus-type public transport operations into a quality public transport service network based on a reformed business model, including adherence to all standards and requirements set out in the National Land Transport Act and other applicable legislation and includes the requirement to upgrade existing services to be fully universally accessible over a reasonable period of time."

The guiding principles for the PTSN are proposed as follows:

- The PTSN will be planned and developed in compliance with the "Guidelines and Requirements: Public Transport Network Grant: 2015/2016, for Business Plan preparation underpinning Budget Proposals for MTEF 2016/17 to 2018/19" of the Department of Transport dated 30 May 2015, with the intention of the Stellenbosch Municipality submitting an application to secure a grant in terms of the above.

- The PTSN will be planned and developed in consideration of and parallel to the transformation, empowerment and upliftment of the local Stellenbosch public transport industry.
- The objective of the PTSN will be to improve public transport service levels and the quality of life of the residents in the Stellenbosch Municipal area.
- The PTSN will be developed in phases with the ultimate goal of the introduction of an Integrated Public Transport Network in accordance with the National Transport Policy and the National Land Transport Act.
- The PTSN will be planned with the objective of achieving financial sustainability.

6.5.3 Process for the Development of the Public Transport Service Network (PTSN)

The proposed process for the development of the PTSN is in compliance with the Department of Transport Guidelines and Requirements for funding from the PTN Grant as well as a parallel process with a strong focus on the transformation of the existing public transport industry. The following process charts indicate the key tasks and inputs to the process leading up to the following key milestones I the first phase of the project:

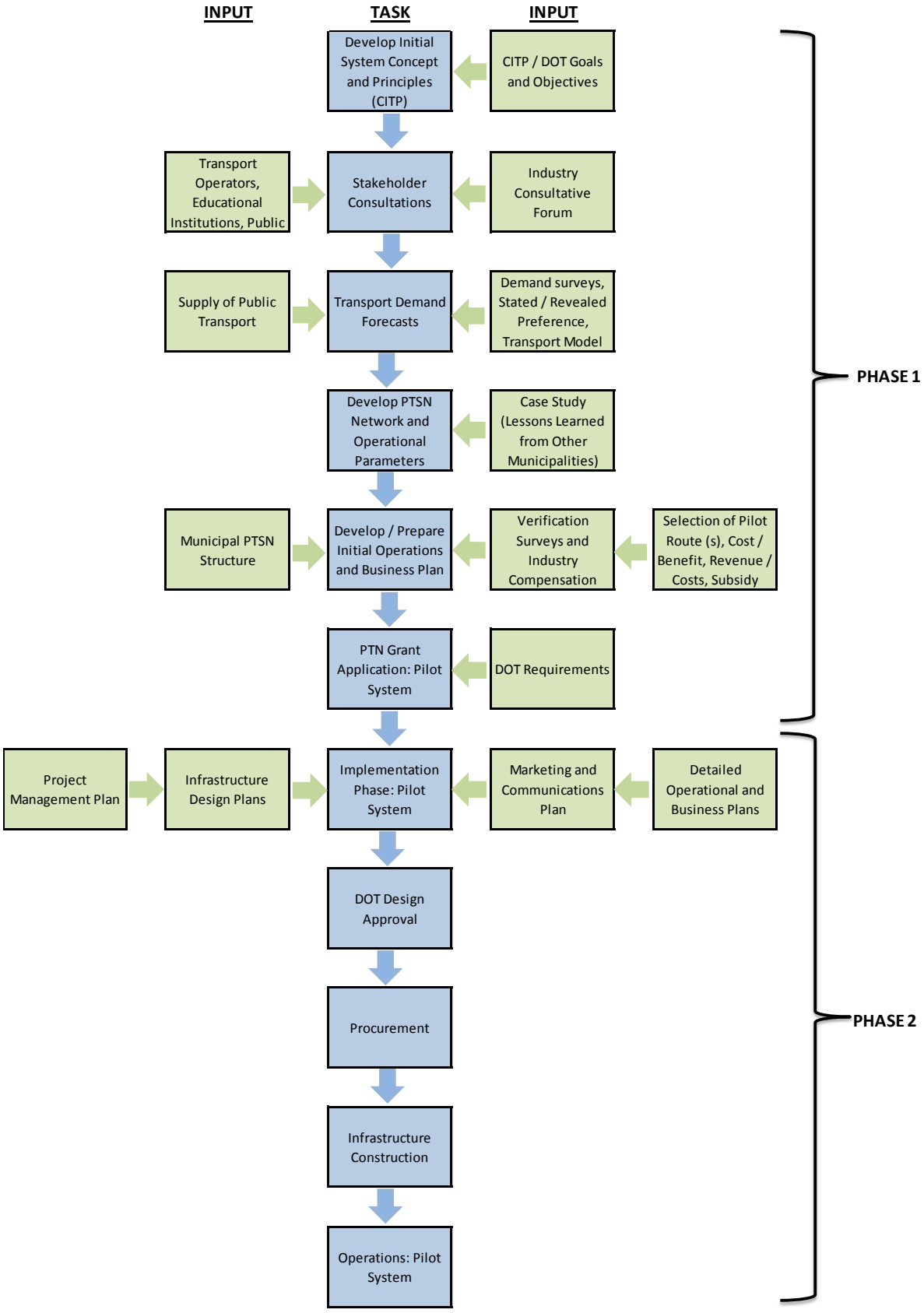
- Approval by the Stellenbosch Municipality of the initial system concept and principles as set out in the CITP
- Preparation of demand forecasts, a proposed route network and operational parameters
- Development of an initial Operations and Business Plan for submission to the Department of Transport for approval of funding through the PTN Grant
- Stakeholder consultation
- The submission of an application to the DOT for grant funding

The consultation phase will include the establishment of a consultative forum or steering committee. Town Councillors should be delegated to participate in this process in order to provide political support.

Other important role-players that must be included in the consultation and planning process are educational institutions. The University of Stellenbosch has an important role to play as it is a high trip generator and it has already proposed a public transport system to serve the University.

These processes are indicated in Figure 6-5 and **Error! Reference source not found.**.

Figure 6-5: PTSN Administrative and Technical Process



6.5.4 Provincial Public Transport Institutional Framework (PPTIF)

- **Overview**

The Western Cape Government has initiated the development of a Provincial Public Transport Institutional Framework (PPTIF) with the primary aim of addressing the key constraints to improving both public and non-motorised transport in the non-metropolitan areas of the Western Cape.

The PPTIF aims to incorporate lessons learnt through the implementation of public transport improvement initiatives in South Africa, particularly in George and Cape Town by answering the core questions listed in Table 6-2:

Table 6-2: PPTIF Core Questions

Core Questions	PPTIF Response
What technical interventions should be implemented to improve public transport and non-motorised transport in the province?	Develop a flexible and context specific approach to public and non-motorised transport improvement.
What institutional and organisational structures need to be implemented to drive and manage these improvements?	Develop enhanced institutional and organisational models.
What will these interventions cost, and how could they be funded?	Develop a cost model and funding strategy.

- **Constraints to progress**

The PPTIF aims to address the following key constraints to progress through the development of appropriate technical, institutional, organisational and financial models.

Capacity at the municipal level: Outside of Cape Town and George, municipalities in the Western Cape have limited capacity to perform municipal land transport functions (NLTA s11(c)), including the planning, implementation and management of integrated public transport networks. In addition, national legislation fails to take into account the difference in capacity and resources between metropolitan, local and district municipalities.

A lack of dedicated funding streams for local public and non-motorised transport improvement: There are limited funding streams available for public and non-motorised transport improvement and transformation in non-metropolitan areas. National funding is currently directed toward 13 priority cities. This includes both funding for execution of the new transport functions required of local government by the NLTA, and funding to put in place the requisite infrastructure and systems for improved public transport systems. Due to the spatial and economic dynamics of South African settlements, significant operational shortfalls are experienced in public transport improvement initiatives. The ability of local government, and of Provincial Government, to fund these operational shortfalls is very limited to non-existent.

The lack of well-defined or developed approaches to public and non-motorised transport in non-metropolitan contexts: National legislation and policy has focussed on the development

and implementation of urban Integrated (Rapid) Public Transport Networks in 13 cities. The model which has emerged incorporates high-specification technology, large-scale infrastructure development and full-scale formalisation of the minibus taxi (MBT) industry. An appropriate public transport response for non-metropolitan areas, such as emerging cities, towns, villages and rural areas, has not reached a similar stage of development, with limited clarity on the appropriate way forward in these contexts. The George Integrated Public Transport Network (GIPTN) has been promoted as an example of public transport improvement outside the major urban centres in South Africa. However, the costs of the GIPTN and the implementation and transformation challenges the project has faced suggest that, while this is a useful model in certain locations, it is not viable to roll-out similar initiatives across the country.

The complexity of industry transition: The implementation of IPTNs in South Africa has involved a significant transformation of the taxi industry business model. Under the IPTN model, new services are operated by Vehicle Operating Companies (VOCs) made up of former bus and taxi operators. These companies are contracted to Government to provide new services to a higher standard. The legislation limits the duration of these operating contracts to a maximum of twelve years. This transition process is fraught with risk for existing operators and significant resistance has been experienced from the industry. The current taxi industry business model is a reliable way of earning an income for operators, albeit fraught with sustainability challenges for the operators. As a result, it takes a lot of time to get the existing operators to become comfortable with the risks of the new system. It also requires the introduction of significant financial incentives through high compensation packages.

- **Legislative mandate**

The proposals of the PPTIF are supported by the legal mandate extended to the Western Cape Government through the National Land Transport Act (NLTA, No. 5 of 2009).

The NLTA devolved the majority of land transport functions to local government (see Section 11(c)), including responsibility for planning, managing and implementing local integrated public transport networks.

However, the provincial sphere of government has a mandate to support under-capacitated municipalities (NLTA s11(b)(v); IRFA s35(2)(d)) to perform their land transport functions and is permitted to jointly exercise or perform any municipal land transport function (NLTA s12(1)). Given the lack of capacity of non-Metro municipalities to perform their land transport functions, the Western Cape Government has a legal mandate to support local governments in the implementation of their public transport functions and the rollout of improved public transport initiatives.

- **PPTIF Categorisation**

The PPTIF is built on a thorough understanding of the status quo, issues and needs for public and non-motorised transport in the Western Cape, which vary across the province based on socio-economic and spatial dynamics. Through an extensive status quo analysis five categories were developed to describe the differing contextual dynamics in the Western Cape. The five categories are indicated in Table 6-3.

Table 6-3: Contextual Dynamics

These categories can be used to understand the different types of interventions required to address the specific issues and competencies of different areas of the Western Cape. The Incremental Approach, described below, is a core facet of the PPTIF and can be adapted to different contexts.

- **The Incremental Approach**

The Incremental Approach to public and non-motorised transport improvement was developed in response to the key constraints described above. The approach proposes the staged implementation of improvement initiatives which result in real improvements to the user experience, but in a fashion that reduces the capacity burden on government, lowers the cost of improvement and reduces the risk of transformation to the public transport industry. The manner in which this is achieved is described in the table below.

Table 6-4: The Incremental Approach

Impact	Description
Demonstrable improvement to public transport user experience	The Incremental Approach focusses on the "low hanging fruit" first in achieving rapid and demonstrable improvement in the transport experience of public transport users. Thus real improvements are achieved in the short term, whilst moving towards a broader, fully integrated network solution over the longer term.
Limits the capacity burden on government	Incremental implementation of improvement initiatives over time provides government with the time to progressively increase capacity and learn through experience, rather than being required to take on full responsibility for managing an IPTN all at once.
Lowers the cost of improvement	The Incremental Approach does not advocate for the rapid and full scale formalisation of public transport. Rather, the focus is on improving the condition for NMT, limited formalization on priority public transport routes, with the network being built up over time as and when the necessary resources become available. In addition, the phased approach aims to limit the need for costly compensation of public transport operators, contributing toward an overall reduction in the cost of system improvement.
Reduces the risk of transformation to the public transport industry	The Incremental Approach lowers the risk to the public transport industry by reducing the risk of each step in the process. The industry's business model is gradually adjusted over time, rather than being fully subsumed. This process inherently lowers risk and enhances the potential of successful engagement and transformation.

The Incremental Approach includes three stages. It is important to note that this approach is not prescriptive. It provides a framework which can be applied to different contexts (different PPTIF categories described above) and adapted accordingly and it provides strategic guidance on what aspects of the transport system should be addressed or improved at what stage.

Stage 1: The aim of Stage 1 is to begin to address some of the critical public and non-motorised transport issues in Western Cape municipalities. To an extent, this approach builds on existing expertise and capacity within local government and begins a process of enhanced capacity development to manage increasingly complex transport networks. At the same time, Stage 1 does not impose a dramatic change to the business model of existing public transport operators and, overall, it allows for shorter term, lower impact, affordable responses which are suited to the specific local areas being addressed.

More specifically, Stage 1 includes a strong focus on non-motorised transport, basic infrastructure improvements and the regulation and enforcement of existing public transport operators, in conjunction with strengthened industry engagement. The aim here is to 'get

the basics rights' before moving toward the implementation of expensive and complex integrated public transport networks.

Stage 2: In Stage 2, government begins to introduce small subsidised service contracts with existing operators for the provision of higher quality public transport services. Through the use of contracting, government begins to incentivise self-organisation and consolidation within the industry. In Stage 2, the work streams established in Stage 1 are continued. Additional areas of focus include introducing and managing subsidised contracts for public transport operators, small-scale ITS and AFC systems and managing data from these systems. Monitoring public transport operators becomes a priority.

Stage 3: In Stage 3, the public transport priorities established in the previous two stages are consolidated and extended. Where appropriate and financially viable, the municipality moves towards progressively implementing a context-appropriate IPTN network with gross contracts between government and private operators. The nature of this network will differ markedly by context and area typology.

- **Proposed institutional arrangements for public transport improvement**

Outside of the City of Cape Town and the Municipality of George, there is very little capacity to pursue public and non-motorised transport improvement at the Western Cape municipal level. Therefore, in order to make progress, it is proposed that the Western Cape Government execute its NLTA s12(1) mandate to work with municipalities to jointly perform or execute municipal land transport functions, while progressively building municipal capacity. In order to limit the burden of this arrangement on the Western Cape Government, only a limited number of targeted municipalities will be actively supported at any given time.

In the longer term, capacity will be developed at the local level so that municipalities can perform their land transport functions either independently or jointly with adjacent municipalities, potentially through the establishment of municipal entities.

Support from the Western Cape Government (the Department of Transport and Public Works) will be split into two overarching functions with different purposes:

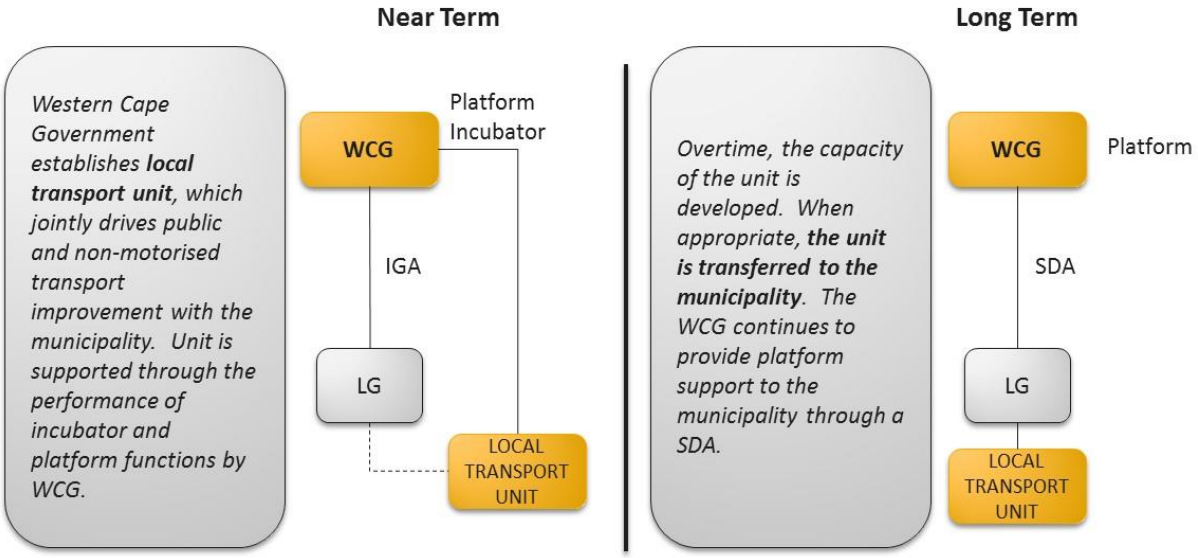
The Western Cape Government will act as an incubator: A newly established provincial incubation unit will work to establish local transport units in priority areas of implementation. Together, these provincial units will plan, implement and manage local public and non-motorised transport improvement, working jointly with municipalities. Once sufficiently developed, the units will be transferred to municipal ownership. In effect, the Western Cape Government acts as an 'incubator', actively developing local units which can be transferred to local government at the appropriate time. Therefore, the incubator role in support of a particular municipality will initially be intensive as capacity is being developed, and will taper off and cease over time once the municipality has sufficient capacity internally.

The Western Cape Government will perform platform functions: Which are those functions that it makes sense to be performed indefinitely on a province-wide basis. This includes developing centralised technology platforms and systems which will support province-wide public and non-motorised transport improvement, such as intelligent transport systems, integrated fare management and a call centre. The Western Cape Government will perform

these functions indefinitely on behalf of LMs to leverage economies of scale and the concentration of specific expertise. Platform functions also allow for the strategic management of data that has significance for province-wide analysis of progress and trends, and for the specific management of operational contracts that the Western Cape Government has a direct financial responsibility for.

These arrangements are illustrated in Figure 6-6.

Figure 6-6: Proposed Institutional Arrangements



The Intergovernmental relationship between the Western Cape Government and targeted municipalities will be supported by the establishment of Joint Planning and Implementation Committees/Forums, to guide improvement initiatives.

It is also important to note that although it is proposed that the Western Cape Government play a central role in the performance/support of functions and flow of funds, a local municipality can take on these roles at any point according to current legislation.

- **Funding**

The Western Cape Government will drive an effort to source the necessary funding for the proposed improvements, both from internal sources and from other sources such as National Government and international donors.

- **Implementation Plan**

The implementation plan covers 5 years and includes the necessary steps in the implementation process, including the technical, institutional, organisational and funding components.

The basis of the implementation plan is the piloting of the PPTIF in 3 priority municipalities over a 5 year period. After the 5 year period, the pilot projects will be reviewed and successful elements will be rolled-out to other municipalities in the Western Cape.

The high level implementation plan is summarised in Table 6-5. The proposed detailed planning and local establishment processes are for targeted or priority municipalities only.

Table 6-5: High Level Implementation Plan

	Year 1	Year 2	Year 3	Year 4	Year 5
WCG	Provincial Establishment	Provincial Establishment			
Priority Municipality 1	Detailed Planning Local Establishment	Local Establishment	Stage 1 Implementation	Stage 1 Implementation	Stage 2 Implementation
Priority Municipality 2		Detailed Planning Local Establishment	Local Establishment	Stage 1 Implementation	Stage 1 Implementation
Priority Municipality 3			Detailed Planning Local Establishment	Local Establishment	Stage 1 Implementation

Through the PPTIF, a prioritisation mechanism was developed to support the Department's decision-making process. This mechanism incorporated four criteria including population, size of economy, growth potential and public transport mode share. The use of this mechanism in conjunction with strategic considerations has resulted in the emergence of the following priority areas. These areas will be the focus of investment and activity over the next five years:

- Saldanha Bay Municipality
- Overstrand Municipality
- The municipalities of the Cape Metropolitan Functional Region including Stellenbosch, Drakenstein, Swartland and Theewaterskloof.

6.6 OPERATIONAL PARAMETERS FOR A PUBLIC TRANSPORT SERVICE NETWORK (PTSN)

6.6.1 Integrated Route Network

Routes within the Stellenbosch Town:

The planning of an integrated route network for Stellenbosch is essential at an early stage to prepare for detailed system and operational planning. The route corridors identified can be incorporated into the on-going development and maintenance of the road network and taken into consideration when projects such as the improvement of intersections or the positioning of new bus stops are being implemented. When new Operating Licence applications are received, these should be carefully considered in light of supply and demand for services on future PTSN routes.

The route network of six routes proposed in the 2011 CITP has been used as the basis for developing a revised PTSN route network to serve the Stellenbosch town area. The routes originally proposed comprise mainly circular routes, operated in two directions simultaneously, and returning to the central point at the Bergzight Terminal. From discussions with public transport operators and experience with operations in other cities, circular routes can be the cause of confusion with drivers and commuters not being sure of which route to take to a particular destination. Circular routes are also the cause of unnecessarily long trip times with passengers having to travel on a circuitous route to reach a particular destination.

The Stellenbosch route network requires a centrally located Terminal to act as the hub of a typical “hub-and-spoke” route network. This Terminal will act as a major transfer point between routes and services. All routes should therefore pass through the Terminal which will provide for transfers to any destination on the network.

At present, public transport operates from the Bergzight Terminal. Although centrally located, this may not be the ideal location to service the Stellenbosch University as an end destination. It is possible that an alternative site that also serves the centre of gravity of the town centre could be found. This would avoid an additional transfer in the system or a longer walking distance. Alternatively, the scheduling of services can be adapted to serve the University without the need for an additional transfer. This matter can be considered at a more detailed stage of planning.

A typical Public Transport Network comprises the following hierarchy of routes:

- Trunk Routes – High capacity routes operated mainly on dedicated lanes with centrally located closed bus stations and utilising articulated or solo buses with right hand side doors.
- Express Routes – High capacity routes with limited stops operated mainly on the major road system, including freeways, with solo buses with left hand side doors and right hand side doors to facilitate kerb-side loading of passengers and loading at centrally located closed bus stations where possible.
- Main Routes – Medium to high capacity routes with frequent stops operated on the major road network utilising solo buses with left hand side doors and right hand side doors to facilitate kerb-side loading of passengers and loading at centrally located closed bus stations where possible.
- Area (or local) routes – Low capacity “feeder” routes operated mainly on residential roads with frequent stops utilising midi-buses with left hand side doors to facilitate kerb-side loading of passengers.

The decision as to which route type or classification should be considered in the case of Stellenbosch could be based on the likely corridor capacity that may be required during the peak hour. The BRT Planning Guide, 2007 (p. 251) states that the corridor capacity is calculated as the product of vehicle capacity, load factor, frequency and the number of stopping bays per route, which results in capacity being stated as the flow of passengers per peak hour per direction (pphpd).

Table 6-6 shows the corridor capacity that can be achieved for different sizes of low entry buses, assuming an operating frequency of 40 buses per hour on trunk routes (which is a headway of 90 seconds) with one stopping bay at each station along a route, a load factor of 1.0 and a practical vehicle capacity (which is 85% of the legal capacity). For two stopping bays per station on the route this capacity will be doubled and with three stopping bays per route it will be trebled.

Table 6-6: Corridor Capacity

Vehicle Type	Vehicle Length (Metres)	Practical Vehicle Capacity (85% of Legal Capacity)	Frequency (Veh/hr.)	Headway (Seconds)	Corridor Capacity (pphpd)
Articulated Bus	18	110	40	90	4 400
Solo Bus	12	75	40	90	3 000
Midi-Bus	9	45	40	90	1 800

Where the passenger demand on a route exceeds 4 400 passengers per hour, express services should be introduced which only stop at the main stations along a route.

Table 6-1 indicates the estimated three hour peak period passenger numbers on the proposed route network based on the results of the EMME/3 Transport Model. The maximum passenger numbers occur on the Kayamandi to Stellenbosch CBD corridor of 2 002 passengers in the peak period i.e. approximately 670 passengers per hour. As indicated in Table 6-6 this figure is well within the maximum corridor capacity provided by a 45 seater Midi-bus service operating at a 90 sec. headway. Practically, for operational reasons, such a service can be successfully operated at a headway of 5 minutes, providing a capacity of 540 pphpd using 45 seat Midi-buses or 900 pphpd using 75 seat Solo Buses.

The IPTN route classification for Stellenbosch is therefore likely to include a system of 75 seat Solo-buses and 45 seat Midi-buses operating in mixed traffic without dedicated lanes. The use of smaller vehicles is possible however the Department of Transport has set stringent standards that dictate that all vehicles must be universally accessible and must be capable of accommodating a wheelchair. This cannot be achieved using existing minibus taxis (15 seat vehicles). The use of minibuses can only be considered for a short period as an interim measure until larger, universally accessible vehicles are acquired.

Taking into consideration the severe traffic congestion being experienced in central Stellenbosch, it may be necessary to improve the capacity of intersections and other traffic bottlenecks by providing additional dedicated turning or queue bypass lanes and special signal phasing for public transport vehicles. This will reduce journey times and improve the quality of service.

The following criteria were applied in the route identification and selection process:

- The routes recommended in the 2011 CITP and the transport modeling results

- Public transport stops should generally be within a 400m walking distance from the community they serve
- Routes should be planned to provide a better or equal service to the local communities when compared to the current services in these areas
- Natural features e.g. steep slopes, watercourses, undeveloped (bushy areas) that make walking to a route difficult must be taken into consideration
- The classification and quality of the road network (e.g. residential roads vs. collector or arterial roads)
- Routes should be aligned so as not to concentrate trips on a particular route so as to create very low headways between vehicles, particularly in residential areas
- Adjacent land uses and types of development

Figure 6-7 indicates the proposed ultimate route network in the Stellenbosch town area. The proposed routes provide linkages to the central Terminal as discussed above. Provision has been made for two east / west through routes, with stops at the central Terminal, as indicated in the 2011 CITP and transport model.

The IPTN routes indicated in Table 6-7 are proposed.

Table 6-7: Proposed Route Destinations and Length

Route Number	Destination	Length (km)
1	Kayamandi (west)	3.9
2	Kayamandi (east)	3.8
3	Idas Valley (south)	4.4
4	Idas Valley (north)	4.7
5	Devon Valley / Unie Park	7.0
6	Onder Papegaaiberg / Unie Park	6.5
7	Paradyskloof	4.9
8	Jamestown	7.1
9	Techno Park	3.2
10	Brandwacht	3.9
11	Cloetesville (east)	4.6
12	Die Boord	4.5
13	Cloetesville (west)	4.1

Figure 6-8 indicates the 400m walking radius from the planned stops on the route network. The figure illustrates that the majority of the service area is well covered and that only small pockets have a longer walking distance than 400m. A larger coverage area of 500m radius has been allowed from the Bergzight Terminal since it is unlikely that passengers would be willing to pay a fare to only travel 500m.

Long Distance (Regional) Routes:

Figure 6-9 indicates the proposed long distance (or regional) route network for the Stellenbosch Municipality. The proposed routes take into account the linkages and development nodes proposed in the SDF as well as the main tourist routes.

The routes indicated in Table 6-8 are proposed:

Table 6-8: Proposed Long Distance (Regional Routes)

Route Number	Destination	Length (km)
1	Stellenbosch – Cape Town Airport	29.3km
2	Stellenbosch – Bellville	26.4km
3	Stellenbosch – Paarl (1)	34.9km
4	Stellenbosch – Somerset West	19.8km
5	Stellenbosch – Eersterivier	19.0km
6	Stellenbosch – Paarl (2)	31.3km
7	Stellenbosch – Franschhoek	30.9km

In addition to the above routes, minor routes can be supplemented by unscheduled minibus services as is currently the case.

The above routes provide accessibility to all parts of the Stellenbosch Municipal Area with linkages to Somerset West, Paarl and to Cape Town with minimum transfers by using proposed interchange points with the proposed MyCiTi network. The linkage points with the proposed MyCiTi system are shown on Figure 6-9.

Passenger Rail Routes:

The passenger rail network within the Stellenbosch Municipal area provides linkages between Stellenbosch and Paarl, Somerset West and Bellville.

There are seven railway stations which fall within the Stellenbosch Municipal area; namely:

- Klapmuts
- Muldersvlei
- Koelenhof

- Du Toit
- Stellenbosch
- Vlottenburg
- Lynedoch

The planning of proposed public transport routes has been carried out to provide linkages between the relevant routes and rail stations. The location of the rail stations within the Stellenbosch town centre is indicated on Figure 6-7. The rail routes are indicated on Figure 6-9.

Figure 6-7: Proposed Stellenbosch Route Network

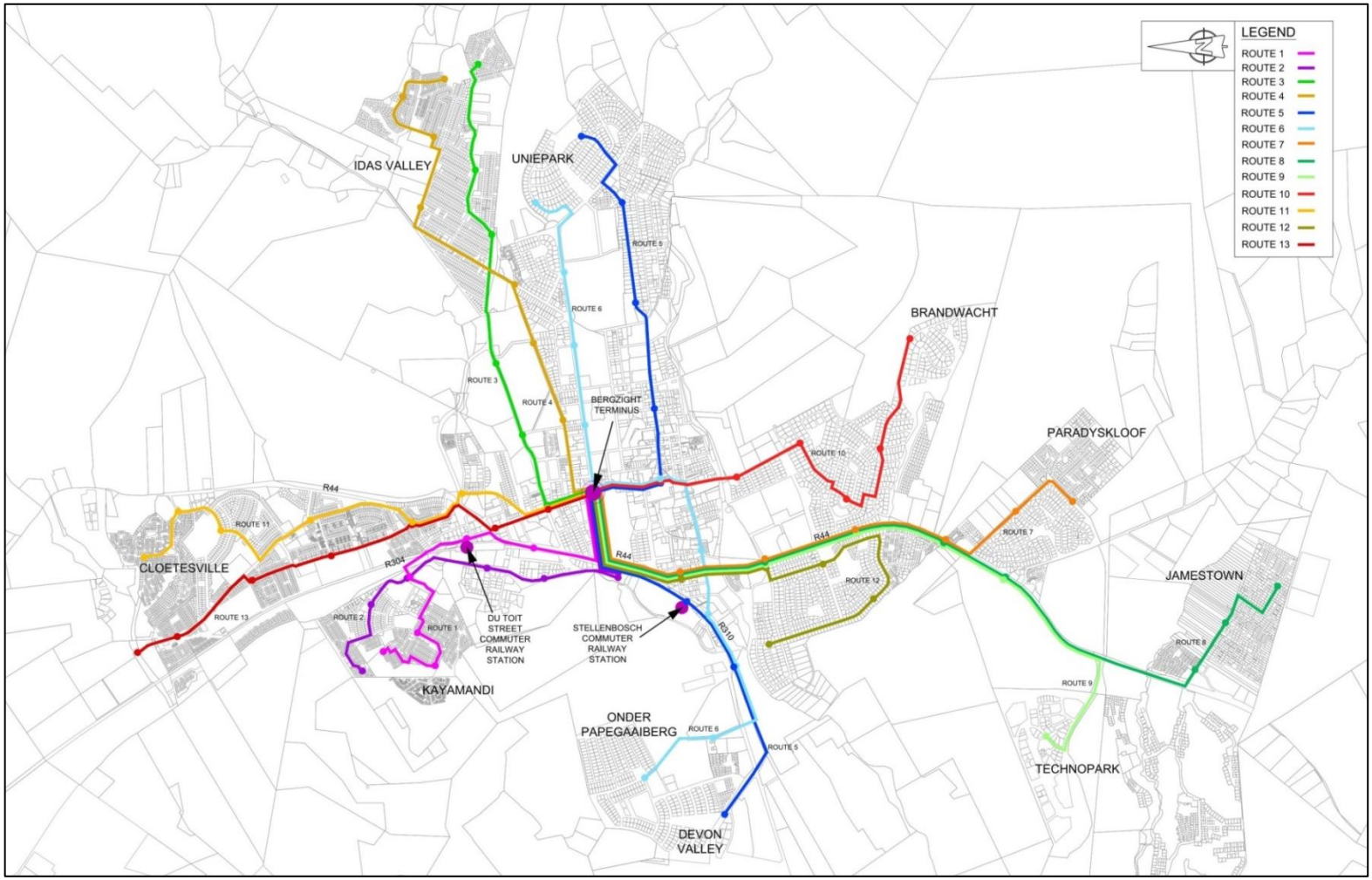


Figure 6-8: Proposed Stellenbosch Route Network with Service Coverage

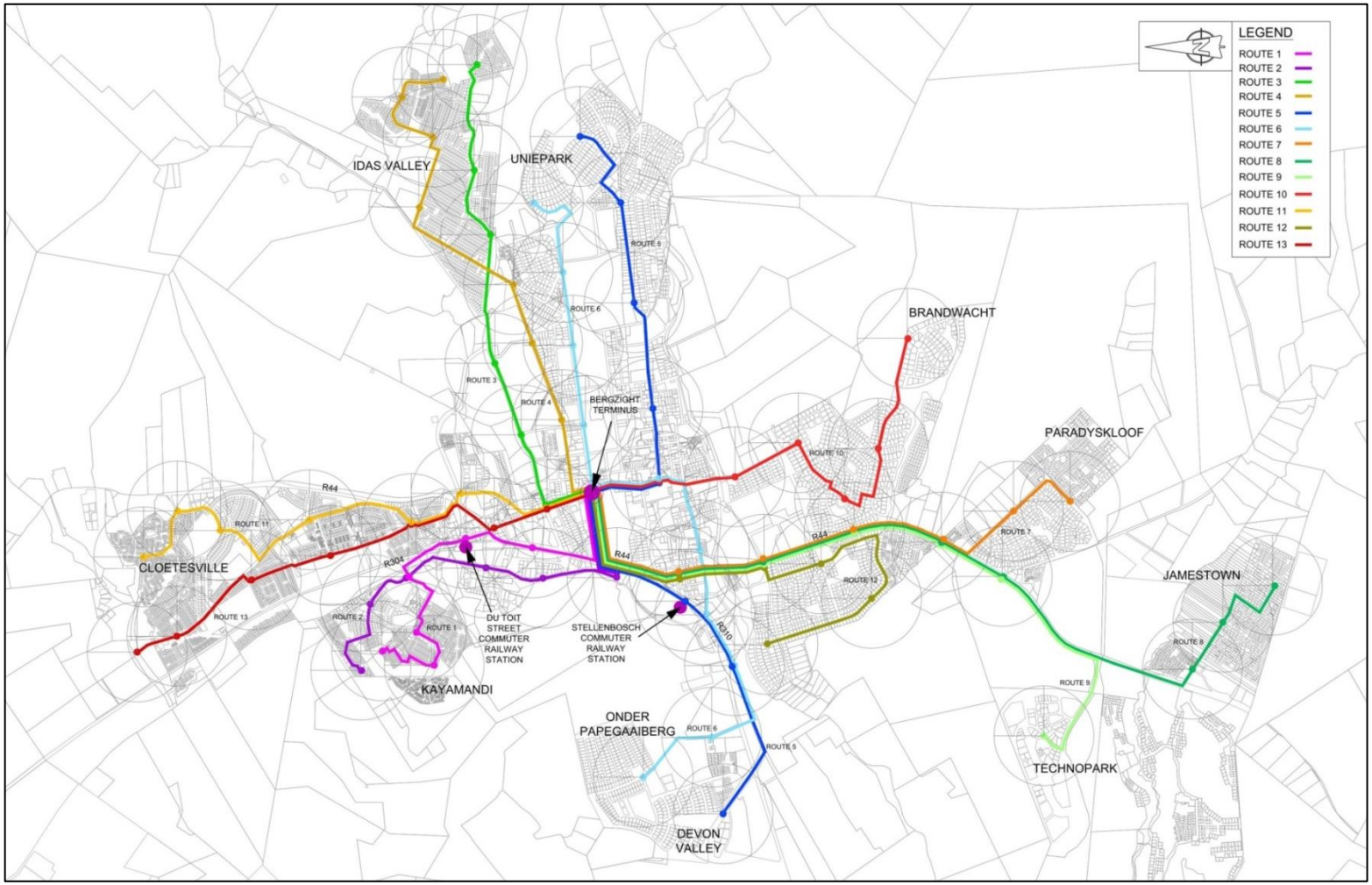
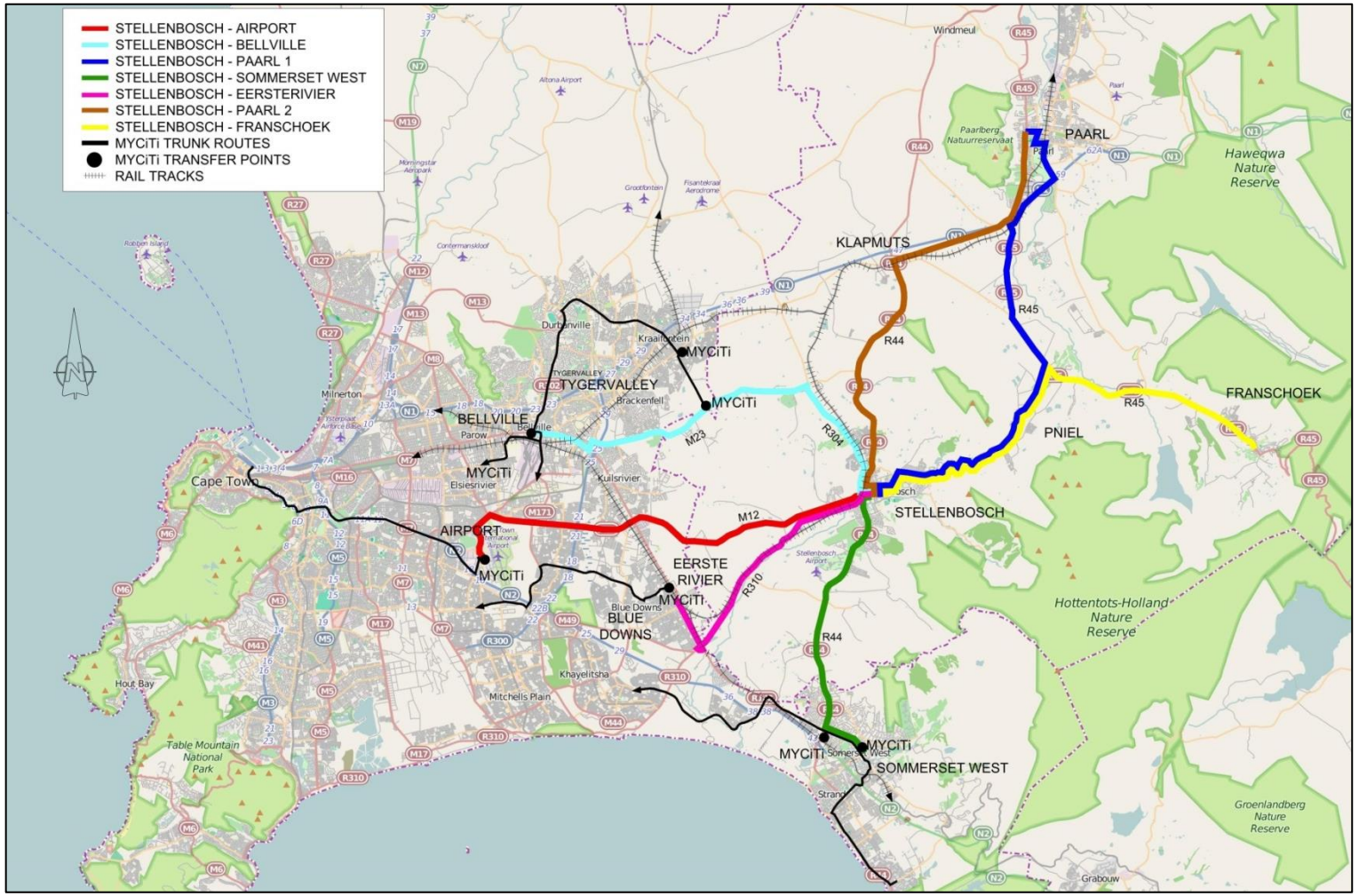


Figure 6-9: Proposed Stellenbosch Long Distance Route Network



6.6.2 Integration of Rail, Bus and NMT

Integration of modes and services should take place at key points in the proposed public transport system. These are the following:

- Central Terminal: Provision should be made at the Terminal for facilities to accommodate the following services:
  - Solo bus – Stellenbosch peak services
  - Standard buses – Existing bus services between Stellenbosch and Somerset West
  - Midi-buses – Stellenbosch peak and off-peak services
  - Mini-bus – existing services to other towns
- Stellenbosch and Du Toit Railway Stations: Facilities for Solo / Midi-bus services operating on public transport routes i.e. stops, signage shelters
- Interchange points between routes: Stops, shelters signage
- Stops: Shelters, signage, approach sidewalks.
- NMT facilities at Terminals and Railway Stations.

6.6.3 Design Operational Parameters

Table 6-9 lists the operational parameters that must be fixed during the more detailed system design process that is to follow on completion of the CITP.

Table 6-9: Design Operational Parameters

Item	Destination	Comments
1	Peak Hour Load Factor	The percentage of a vehicle's total capacity that is actually occupied. A high load factor is an indication that the system is being effectively utilised but is more prone to "crush loads" when disruptions, delays, obstruction and stoppages occur.
2	The distance between stations and stops	The distance between stations is determined by the targeted operating speed and the distance which passengers are prepared to walk in order to board a bus. (a distance of 800m has been used in the planning of the Stellenbosch route network).
3	System capacity and speed.	In order to reduce the amount of vehicles required, it is critical to achieve the highest possible running speed of vehicles.
4	Hours of Operation	Start Time and End Time
5	Headways between vehicles	To determine the most suitable vehicle type to be allocated to a route, it is necessary to make a decision on the minimum headway that is acceptable, where headway is defined as the time interval between successive vehicles operating on a route.

Item	Destination	Comments
6	Cycle time	The cycle time of each route is calculated to include the running time of the inward journey plus dwell time at stops and layover time at the end terminal plus the running time of the outward journey plus dwell time at stops and thus is different for each route.
7	Universal Accessibility	"Universal Accessibility" is the principle that all public facilities should be available to all people and be easy to access and use irrespective of the personal ability of each individual. All facilities and public transport services must therefore allow people with disabilities to access and use the facilities and services in a similar manner to any able person.
8	Vehicle type and capacity	-
9	Vehicle floor height	One of the primary purposes of a rapid bus system is to reduce the time for passengers to board and alight from the vehicles. A prerequisite, to achieve this, is to provide for level boarding where the bus floor height matches the platform height

6.7 PUBLIC TRANSPORT INFRASTRUCTURE REQUIREMENTS

A wide range of infrastructure is required to provide a public transport system that is of a high quality and provides an improved level of service to the customer. The infrastructure should be standardised and branded with a unique identity across the system elements including vehicles, ticketing systems, customer information and infrastructure. The following section provides a description of the basic infrastructure requirements that should be considered in the design process.

6.7.1 Route Infrastructure

Route infrastructure comprises of the following facilities:

- Roadside stops (embayments or kerbside and supporting NMT infrastructure)
- Passenger shelters – located at roadside stops at appropriate locations with lighting and information panel displaying route and timetable information
- Turn-around facilities at the route terminals (mini-circle or hammer head)

6.7.2 Terminals

It is proposed that Stellenbosch be served by a main Terminal located in the town centre. At present the Terminal for the existing minibus taxi services is located at the Bergzight taxi Terminal on the corner of Merriman Avenue and Bird Street. It is possible that this Terminal will be relocated to a new location that will reduce the need to transfer in the town centre en-route to the University campus. A suitable alternative site should be the subject of a detailed feasibility study to evaluate land requirements, services, accessibility and environmental impacts.

The following facilities should be provided at the main Terminal:

- Loading bays for 9m, 45 seat Midi Buses or 12m, 75 seat Solo Buses for the 13 routes proposed to serve the routes in the Stellenbosch town centre and the 7 long distance routes
- A drop-off facility
- A holding area
- Shelters over the passenger waiting areas
- Lighting
- Signage
- Ablutions
- Buildings for Terminal management staff
- Facilities to accommodate small business / traders

The main Terminal will not function as a holding area for out of service buses in the off peak. Holding for buses will only accommodate sufficient vehicles to allow for driver shift changes or rest breaks. All out of service vehicles must be routed to the Depot for longer duration parking. Fuelling and cleaning will also be carried out at the Depot.

6.7.3 Traffic Control

All public transport services will operate according to a fixed timetable. It is therefore important that vehicles are not unnecessarily delayed due to traffic congestion that is prevalent at some intersections in Stellenbosch. This is important since it is unlikely that the Stellenbosch public transport system will be provided with dedicated traffic lanes throughout. It is therefore proposed that a traffic control system be implemented in the Stellenbosch town centre. The system should be capable of managing traffic flows and minimising delays to public transport vehicles. Dedicated bus lanes should be provided at intersections where possible to facilitate turning of public transport vehicles or to allow an early release for buses within the signal phasing.

6.7.4 Depot Facilities

A Depot is required for public transport vehicles to park overnight and when out of service. The depot should be located in a central position to minimise “dead” mileage from the Depot to the beginning of the route when it comes into service in the morning or when vehicles go out of service. Vehicles going out of service after the peak must return to the depot and not “hold” at the central Terminal. A variety of activities must be provided for, although some may be outsourced. The following facilities should be provided:

- Driver facilities – a locker room with secure facilities for driver’s personal effects.
- A canteen
- Ablutions for drivers

- A secure facility to download ticket machines or handle cash if so required
- Offices for Depot management
- Washbays
- Fuelling facilities
- A panel shop for minor repairs
- A mechanical workshop for servicing of vehicles
- Parking area for buses
- Parking for drivers and staff personal vehicles
- A secure fenced area
- Security
- Lighting
- Signage

6.8 Planning and Implementation Strategy

6.8.1 Data Collection and Transport Model

The planning of a sustainable Public Transport System for the Stellenbosch Municipality requires a comprehensive analysis of the current and future demand for public transport based on development trends and transport patterns. In 2008 a transport model was developed for Stellenbosch based an extensive data collection exercise including a household interview survey. The City of Cape Town's EMME/3 transport model was used as the base which would also allow for the testing of transport scenarios beyond the municipal border of Stellenbosch.

The data collection for the model included traffic counts at more than 30 key intersections as well as permanent Provincial counting stations and household interview surveys collected in 2009. The primary source of spatial planning data was the 2003 draft Spatial Development Framework.

At the time only a 2009 am peak model was prepared and long term future land use scenarios were not tested due to the fact that the SDF was only in draft form. There was also certain data (employment statistics) that were not surveyed. Subsequently the SDF was approved by Council in 2012 and is again being revised.

The final 2010 report on the transport modelling recommended that additional information be obtained to improve the transport model and that long term scenarios be tested using the latest land use information. The report recommended that:

- Additional surveys be conducted to include farming activities
- Information be collected from schools to develop a school trip model
- The latest traffic accounts be included

- The Stellenbosch land use GIS be updated with more accurate residential information
- A detailed employment survey be undertaken

It is therefore proposed that the transport model be updated and used to test the proposed public transport routes in the Stellenbosch area to establish current and future demand for public transport. Since the previous data that was collected is now some 5 years old it is proposed that new surveys be undertaken. A full assessment of the data required should be carried out and costed. The possibility of again using the City of Cape Town EMME/3 transport model that has been updated in the interim should be explored.

6.8.2 Operational Plan

A detailed Operational Plan for the public transport system is required to define and establish the network and services necessary to satisfy the existing and future demand in the Stellenbosch municipal area based on the operational parameters and vehicle fleet standards proposed in sections 6.6 and **Error! Reference source not found.** above. The Operational Plan should deal with the following:

- Route descriptions for all categories of routes
- Station and stop locations for all services
- Existing and projected travel demand on all routes
- Service frequencies (headways)
- Schedules and timetables
- Fleet requirements by mode
- Planning of routes, terminals, stations, stops and depot facilities to a predetermined level of detail (conceptual)
- Phased implementation plan

6.8.3 Business Plan

A detailed Business Plan is required to define the costs (both capital and operational) of the proposed public transport system. The Business Plan should deal with the following:

- Institutional plan and cost for the planning, management and monitoring of the system
- Projected system costs (procurement of vehicles, infrastructure, ticketing system, marketing, safety and security)
- Projected system operational costs
- Projected system income
- Operator compensation costs
- Funding sources and subsidies

6.8.4 Marketing and Communications Plan

The marketing if the public transport system is essential to ensure its success through the implementation of an on-going marketing and communications plan. The plan should include:

- Development of a system brand and logo
- The development of media to communicate the system, to all role-players and potential users
- The development of special events to inform the public of how the system will function

6.8.5 Safety and Security Plan

A safe and secure service is vital for the successful operation of the public transport system. The Safety and Security Plan should include:

- A risk analysis
- A plan for customer and staff safety and security
- Safety of infrastructure
- The planning of an electronic monitoring system at facilities and on vehicles

6.8.6 Phasing Plan

For various reasons it may be desirable to phase the implementation process over a number of months or even years. This may be due to cost, availability of resources or capacity. A number of options may be considered as follows:

- Public Transport Services: Services can be introduced on certain high priority routes according to passenger demand and fare income projections to establish a viable “core” system that can be expanded gradually to other less important routes. Funding availability may dictate the pace of the provision of infrastructure and the subsidisation of operating costs. Initially a “pilot” system could be introduced on one or two routes to test all aspects of the system.
- Infrastructure: The construction of infrastructure can be phased according to the proposed services phasing plan. At the outset it will be necessary to provide facilities for the maintenance and storing of vehicles at a central depot. The size of the depot and the extent of the facilities required will depend on the vehicle fleet size. Some functions e.g. vehicle maintenance could be outsourced. The specifications for the provision of infrastructure are important to maintain a high standard to attract potential customers, although the size of facilities can be scaled down initially.
- Vehicles: According to the Department of Transport requirements, all vehicles should be fully universally accessible. New universally accessible buses must therefore be purchased. It is possible to use limited numbers of existing vehicles for a short period until new buses can be procured.

- Ticketing System: One of the key elements of a new public transport system is the fast journey time compared with other modes. It is thus necessary to speed up the boarding of buses. This can be done by introducing a “tag on tag off” smart card system of fare collection. The other advantage is that this type of system avoids the use of cash and associated security issues.

6.9 BUDGET AND FUNDING SOURCES

In the “Guidelines and Requirements: Public Transport Network Grant: 2015/2016, for Business Plan preparation underpinning Budget Proposals for MTEF 2016/17 to 2018/19”, the Department of Transport sets out the various project types that qualify for investments from the national Public Transport Network (PTN) Grant.

It is recommended that the Stellenbosch Municipality should approach the Department of Transport with a view to submitting an application for a PTN Grant to plan and implement a quality Public Transport Service Network. To access this funding, approval must be sought from the Department of Transport in the required format. If approved, funding is allocated from the PTN Grant on an annual basis.

Applications are usually made in mid year and successful applications are gazetted in February of the following year. The Stellenbosch Municipality should base their application on the public transport system proposed in the Comprehensive Integrated Transport Plan.

It is anticipated that the public transport system in Stellenbosch will be implemented in phases, commencing with one or two routes initially. Operational Plans and Business Plans should be prepared initially for the entire IPTN and then one or two routes selected for implementation of a pilot service. It is estimated that the funding listed in Table 6-10 will be required for planning and implementation of approximately 16 to 20 km of public transport routes utilising 10 x 45 seat Midi buses.

Table 6-10: IPTN Phase 1: Indicative Costing

No.	Item	Year					
		2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
1	Operational and Business Plan	R 1 500 000	R 2 500 000	R 2 500 000			
2	Detailed Design and Tender		R 5 000 000	R 5 000 000	R 5 000 000	R 8 341 000	
3	Procurement of IPTN Vehicles					R 10 000 000	
4	Transformation and Empowerment Process		R 5 000 000	R 5 000 000	R 5 000 000	R 5 000 000	R 5 000 000
5	Compensation of Operators						R 2 160 000
6	Construction of Infrastructure:						
6.1	Route Stops and Shelters				R 6 250 000		
6.2	Central Terminal				R 15 000 000	R 15 000 000	
6.3	Temporary Depot				R 25 000 000	R 25 000 000	
6.5	Ticketing System					R 20 000 000	
6.6	Control Centre				R 10 000 000	R 10 000 000	
6.7	Road and Intersection upgrading				R 25 000 000	R 25 000 000	
6.8	ITS				R 5 000 000	R 15 000 000	
7	Annual Vehicle Operating Costs						R 15 000 000
8	Management Entity Annual Cost				R 5 000 000	R 11 250 000	R 11 250 000
9	Annual Infrastructure Maintenance Cost						R 1 000 000
	Sub-Total	R 1 500 000	R 12 500 000	R 12 500 000	R 101 250 000	R 144 591 000	R 34 410 000
10	Revenue						R 23 100 000
	Nett Cost	R 1 500 000	R 12 500 000	R 12 500 000	R 101 250 000	R 144 591 000	R 11 310 000

7. OPERATING LICENCE STRATEGY

SYNOPSIS:

- ≈ No road based public transport service may be operated without an Operating Licence issued by the Provincial Regulatory Entity in terms of the National Land Transport Act (NLTA).
- ≈ The purpose and objective of the Operating Licence Strategy (OLS) is to enable the Stellenbosch Municipality (SM) to make recommendations to the Provincial Regulatory Entity (PRE) based on the policies and strategies contained in its Comprehensive Integrated Transport Plan (CITP).
- ≈ The evaluation of Operating Licence (OL) applications follows the following procedure:
    - An application for an OL is submitted to the PRE and is referred to the SM.
    - The OL application is circulated to the appropriate persons / Departments internally within the SM.
    - Evaluation of Supply and Demand: The OL application is checked against the available survey data of passenger demand on the applicable routes.
    - The OL application is checked against the available survey data of rank, terminal or stops capacity serving the applicable routes
    - The OL application is assessed as to its impact on the conceptual Public Transport Network Routes that are identified in the ITP, or will operate in parallel to or in conflict with any commuter rail services or bus services.
    - The OL is checked against the record of outstanding warrants or convictions, previous convictions relating to the operation of public transport services and the ability of the applicant to operate the service in a manner satisfactory to the public.
    - In terms of section 78 of the NLTA, if a licence has not been in use for more than 180 days, the licence can be cancelled. The licence holder must be asked to furnish, in writing, satisfactory reasons why the service has not been operated, after which the licence can be extended for a further 180 days or cancelled.
    - If all the responses to the evaluation support the approval of the application, a letter of approval is then issued to the NPTR or the PRE with any conditions attached. If the responses do not support the application, a letter of rejection is then issued.

7.1 ORIENTATION

7.1.1 Purpose and Objectives

The National Land Transport - Act No 5 of 2009 (the Act) provides for the process of the transformation and restructuring of the national land transport system and includes the regulation of road based public transport. Sections 20 and 23 of the Act provide for the establishment of a National Public Transport Regulator (NPTR) and a Provincial Regulatory Entity (PRE) to consider applications regarding Operating Licences for inter-provincial and intra-provincial transport respectively, subject to the procedures set out in Chapter 6 of the Act.

In the Western Cape Province, the Operating Licence function has been assigned to the Western Cape Government which has established a PRE as required by the Act. Applications for Operating Licences received by the PRE (or the NPTR) must be referred to the relevant Planning Authority (Municipality) which must then indicate if there is a need for the service in terms of its Integrated Transport Plan. Planning Authorities may recommend that the application be accepted or rejected or may attach conditions to the approval.

If the Operating Licence function has been assigned to a Municipality (Section 11 of the Act), then the Municipality is responsible for deciding on applications for Operating Licences for public transport services in its area of jurisdiction. At this stage the Operating Licence function has not been assigned to the Stellenbosch Local Municipality and the Municipality must thus respond and comment on Operating Licence applications referred to it by the PRE.

The purpose and objective of the Operating Licence Strategy (OLS) is to enable the Stellenbosch Local Municipality to make recommendations to the PRE based on the policies and strategies contained in its Comprehensive Integrated Transport Plan (CITP) including strategies pertaining to the role of each public transport mode, supply and demand for public transport, the use and capacity of public transport facilities and any plans for the rationalization of the public transport system (e.g. the establishment of an Integrated Public Transport Network).

7.1.2 Responsible Authority

The Stellenbosch Local Municipality is responsible for the preparation and implementation of a Comprehensive Integrated Transport Plan for its area. The CITP contains a Transport Register, including a full description of the public transport system and the supply and demand for public transport services and facilities, and a Rationalisation Plan for public transport including the planning of an Integrated Public Transport Network (IPTN).

The Transport Register and the IPTN are the principle instruments on which comments and conditions for the granting or rejection of applications for Operating Licences will be based.

7.1.3 Description of the Area

The Stellenbosch Local Municipality is situated about 50km from Cape Town and is bordered by the N1 and N2 routes. The municipal area is approximately 900 km^2 and has a population of approximately 155 000 people.

The following are the main settlements that fall within the area:

- Stellenbosch
- Franschhoek
- Klapmuts
- La Motte
- Wemmershoek
- Groot Drakenstein
- Dwarsrivier Valley (Pniel, Johannesdal, Lanquedoc, Kylemore)
- Muldersvlei Crossroads
- Koelenhof
- Jamestown, De Zalze
- Vlottenberg
- Spier
- Lynedoch
- Raithby

Public transport services within the area are provided by a commuter rail system that links Stellenbosch to Cape Town and Paarl and an extensive informal minibus taxi system. There is also a limited bus service between Stellenbosch and Somerset West / Strand and private tourism services.

7.1.4 Period of Validity

This Operating Licence Strategy is a component of the CITP for the five year period from 2016 to 2020.

The CITP and the OLS must be updated annually in compliance with the Act.

7.2 THE PUBLIC TRANSPORT SYSTEM

7.2.1 Public Transport Services and Routes

Minibus Taxi Services:

Public transport services by minibus taxi are provided on 43 licenced routes in the Stellenbosch area as listed in Table 7-1. The routes are also indicated on Figure 7-1.

Table 7-1: Existing Minibus Taxi Routes

No.	Route Number	Origin / Destination
1	630	Stellenbosch (Bloem Street Rank) – Idasvalley
2	631	Stellenbosch (Bloem Street Rank) – Idasvalley
3	632	Stellenbosch (Bloem Street Rank) – Idasvalley
4	633	Stellenbosch (Bloem Street Rank) – Idasvalley
5	634	Stellenbosch (Bloem Street Rank) – Idasvalley
6	635	Stellenbosch (Bloem Street Rank) – Idasvalley
7	636	Stellenbosch (Bloem Street Rank) – Cloetesville
8	637	Stellenbosch (Bloem Street Rank) – Cloetesville
9	656	Stellenbosch (Bergzight Rank) – Idasvalley
10	657	Stellenbosch (Bergzight Rank) – Idasvalley
11	658	Stellenbosch (Bergzight Rank) – Idasvalley
12	659	Stellenbosch (Bergzight Rank) – Idasvalley
13	660	Stellenbosch (Bergzight Rank) – Idasvalley
14	661	Stellenbosch (Bergzight Rank) – Idasvalley
15	662	Stellenbosch (Bergzight Rank) – Koelenhof
16	663	Stellenbosch (Bergzight Rank) – Vlottenburg
17	664	Stellenbosch (Bergzight Rank) – Devon Valley
18	665	Stellenbosch (Bergzight Rank) – Cloetesville
19	666	Stellenbosch (Bergzight Rank) – Cloetesville
20	667	Stellenbosch (Bloem Street Rank) – Pniel
21	668	Stellenbosch (Bloem Street Rank) - Kylemore
22	669	Stellenbosch (Bloem Street Rank) – Somerset West
23	670	Stellenbosch (Bloem Street Rank) – James Town
24	671	Stellenbosch (Bloem Street Rank) – Jamestown
25	672	Stellenbosch (Bergzight Rank) – Lynedoch Station
26	673a and 673b	Stellenbosch (Bergzight Rank) – Elsenberg
27	674a and 674b	Stellenbosch (Bergzight Rank) – Elsenberg
28	675	Stellenbosch (Bergzight Rank) – Jonkershoek
29	676	Stellenbosch (Bergzight Rank) – Kayamandi

No.	Route Number	Origin / Destination
30	677	Stellenbosch (Bergzight Rank) – Kayamandi
31	722	Stellenbosch (Bergzight Rank) – Kayamandi
32	723	Stellenbosch (Bergzight Rank) – Kayamandi
33	754	Pniel - Paarl
34	755	Franschhoek - Paarl
35	813	Kayamandi – Stellenbosch (Bergzight)
36	814	Kayamandi – Stellenbosch (Bergzight)
37	873	Franschhoek - Paarl
39	A88	Stellenbosch (Bergzight) – Kuilsrivier
40	F28a and F28b	Stellenbosch (Stelmark) - Klapmuts
41	N12	Stellenbosch (Du Toit Station) - Belville
42	N42	Franschhoek – Paarl
43	Q80	Kayamandi - Lwandle

In addition to the routes indicated in Table 7-1, extensions to these routes or other unlicensed routes may be in operation that requires consideration for new Operating Licences.

The supply and demand for public transport services on the above routes is assessed in section 7.4.3.

There are currently three Taxi Associations in the Stellenbosch municipal area to which individual minibus taxi owners must belong in order to be considered for an Operating Licence. These are:

- Stellenbosch Taxi Association
- Kayamandi Taxi Association
- Franschhoek Taxi Association

Bus Services:

A bus service is provided by Golden Arrow Bus Company between Stellenbosch and Somerset West / Strand, for which they have an existing Operating Licence. The service is limited to one bus in the morning and afternoon peak.

Elweirda Bus Company (the old Boland Transport) has existing Operating Licences that are not in use. The company concentrates on scholar and tourism services.

Several private operators provide coach services for tourists.

Figure 7-1: Exiting Minibus Taxi Routes – Full Municipal Area

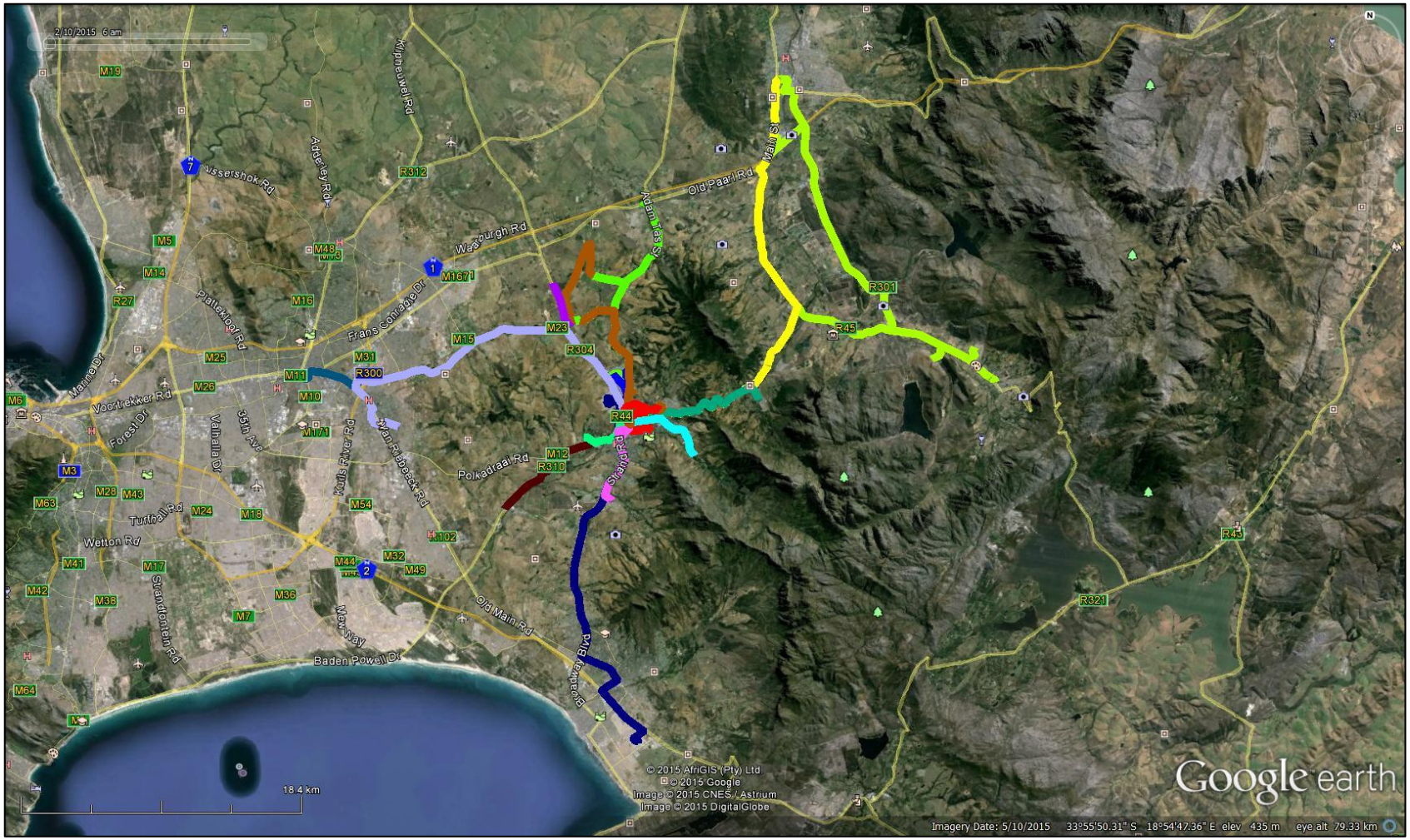
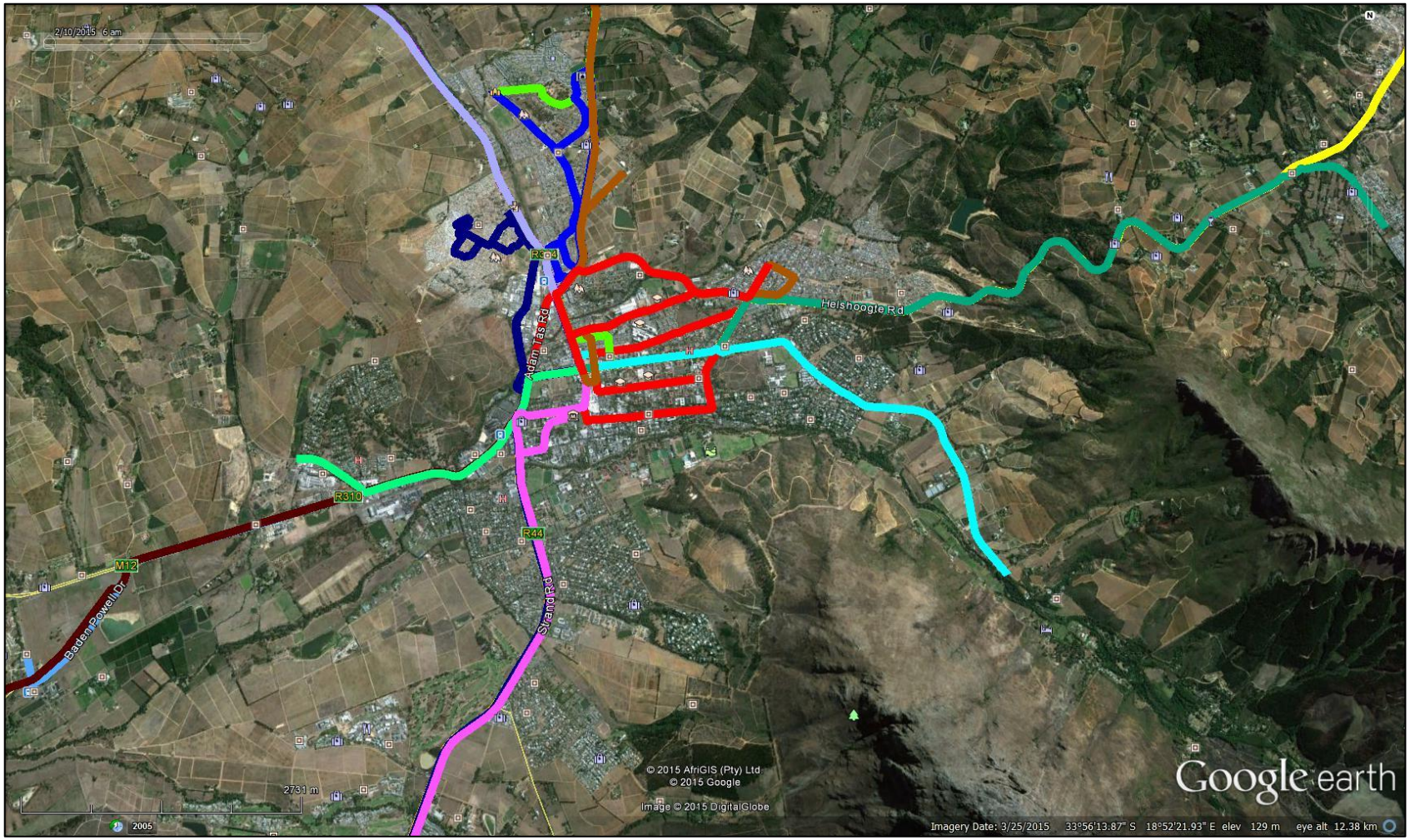


Figure 7-2: Exiting Minibus Taxi Routes – Central Municipal Area



7.2.2 Public Transport Facilities

Full details of the location and facilities available at existing facilities uses by minibus taxi operators are included in the Transport Register. A list of the existing facilities is included in Table 7-2.

Minibus Taxi Facilities:

Formal taxi facilities are those where specific facilities have been constructed for use by public transport. Informal facilities include areas that are used by public transport without any kind of "betterment" or areas that are constructed but not specifically as a rank or terminal.

Table 7-2: Minibus Taxi Facilities

Formal Taxi Rank	Informal Taxi Ranks / Facilities
Bergzight	Kayamandi
	Kayamandi Bridge / Kayamandi Mall
	Stellenbosch Station
	Adam Tas (Sawmills)
	Pniel
	Franschhoek Lay-by
	Franschhoek
	Klapmuts
	Lanquedock (Sendingsgrond)
Franschhoek Taxi Rank	Franschhoek – south end of Huguenot Street

Bus Facilities:

There are no formal facilities for standard buses or tour buses in Stellenbosch and buses operate from demarcated on-street stops.

7.2.3 Public Transport Surveys

Surveys of public transport operations are required to obtain information necessary to evaluate the supply and demand for public transport services and the requirements and capacity of public transport facilities. Surveys are usually undertaken at specific locations e.g. terminals, stops or ranks, on-board vehicles or at cordons crossed by public transport routes.

The type of information to be collected includes the following:

- Number of passengers boarding or alighting public transport vehicles,
- Number of passengers left in queues at the end of the peak period
- Number of vehicle departures / arrivals in the peak period to and from specific destinations

- The routes served by the public transport services
- The vehicle capacity
- Number and type of vehicle crossing a cordon
- Vehicle registration number, rank permit etc.

Since public transport activities vary by the time of day, it is necessary to undertake the survey over an extender period of 12 or 6 hours to ensure that the actual peak is covered in the survey. This may be influenced by the cost of the survey and the location of the survey point. Typically in the am peak, passengers board along the routes and alight at the end destination (work, school etc.) and in the pm passengers queue for public transport services at a specific boarding point at a terminal or stop. Surveys are thus usually undertaken in the pm peak at these specific points. Surveys may also be necessary in the am peak if passengers are loaded at major transfer points.

Passenger volumes may also vary according to the time of year and thus it is recommended that the surveys be carried out twice a year e.g. every 6 months, on a week day during school terms when demand is the highest.

In the current review of the CITP, public transport surveys were undertaken during June 2015. The methodology used and the information collected during these surveys in documented in Chapter 2: Public Transport Register. It is recommended that a similar procedure be adopted for future public transport surveys in the Stellenbosch Municipality.

7.2.4 Current Operating Licences

According to the information supplied by the PRE, Table 7-3 indicates the existing Operating Licences in use in Stellenbosch.

Table 7-3: Current Operating Licences for Minibus Services in Stellenbosch

No.	Route Number	Origin / Destination	Taxi Association	No. Active Operating Licences
1	630	Stellenbosch (Bloem Street Rank) – Idasvalley	Stellenbosch Taxi Association	2
2	631	Stellenbosch (Bloem Street Rank) – Idasvalley	Stellenbosch Taxi Association	2
3	632	Stellenbosch (Bloem Street Rank) – Idasvalley	Stellenbosch Taxi Association	2
4	633	Stellenbosch (Bloem Street Rank) – Idasvalley	Stellenbosch Taxi Association	2
5	634	Stellenbosch (Bloem Street Rank) – Idasvalley	Stellenbosch Taxi Association	2
6	635	Stellenbosch (Bloem Street	Stellenbosch Taxi Association	2

No.	Route Number	Origin / Destination	Taxi Association	No. Active Operating Licences
		Rank) – Idasvalley		
7	636	Stellenbosch (Bloem Street Rank) – Cloetesville	Stellenbosch Taxi Association	3
8	637	Stellenbosch (Bloem Street Rank) – Cloetesville	Stellenbosch Taxi Association	3
9	656	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	9
10	657	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	9
11	658	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	9
12	659	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	9
13	660	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	9
14	661	Stellenbosch (Bergzight Rank) – Idasvalley	Stellenbosch Taxi Association	7
15	662	Stellenbosch (Bergzight Rank) – Koelenhof	Stellenbosch Taxi Association	1
16	663	Stellenbosch (Bergzight Rank) – Vlottenburg	Stellenbosch Taxi Association	1
17	664	Stellenbosch (Bergzight Rank) – Devon Valley	Stellenbosch Taxi Association	4
18	665	Stellenbosch (Bergzight Rank) – Cloetesville	Stellenbosch Taxi Association	13
19	666	Stellenbosch (Bergzight Rank) – Cloetesville	Stellenbosch Taxi Association	14
20	667	Stellenbosch (Bloem Street Rank) – Pniel	Stellenbosch Taxi Association	9
21	668	Stellenbosch (Bloem Street Rank) - Kylemore	Stellenbosch Taxi Association	8
22	669	Stellenbosch (Bloem Street Rank) – Somerset West	Stellenbosch Taxi Association	3
23	670	Stellenbosch (Bloem Street Rank) – James Town	Stellenbosch Taxi Association	4

No.	Route Number	Origin / Destination	Taxi Association	No. Active Operating Licences
24	671	Stellenbosch (Bloem Street Rank) – Jamestown	Stellenbosch Taxi Association	4
25	672	Stellenbosch (Bergzight Rank) – Lynedoch Station	Stellenbosch Taxi Association	1
26	673a and 673b	Stellenbosch (Bergzight Rank) – Elsenberg	Stellenbosch Taxi Association	3
27	674a and 674b	Stellenbosch (Bergzight Rank) – Elsenberg	Stellenbosch Taxi Association	3
28	675	Stellenbosch (Bergzight Rank) – Jonkershoek	Stellenbosch Taxi Association	3
29	676	Stellenbosch (Bergzight Rank) – Kayamandi	Kayamandi Taxi Association	23
30	677	Stellenbosch (Bergzight Rank) – Kayamandi	Kayamandi Taxi Association	23
31	722	Stellenbosch (Bergzight Rank) – Kayamandi	Kayamandi Taxi Association	1
32	723	Stellenbosch (Bergzight Rank) – Kayamandi	Kayamandi Taxi Association	1
33	754	Pniel - Paarl	Franschhoek Taxi Association	12
34	755	Franschhoek - Paarl	Franschhoek Taxi Association	26
35	813	Kayamandi – Stellenbosch (Bergzight)	Kayamandi Taxi Association	1
36	814	Kayamandi – Stellenbosch (Bergzight)	Kayamandi Taxi Association	1
37	873	Franschhoek - Paarl	Franschhoek Taxi Association	27
39	A88	Stellenbosch (Bergzight) – Kuilsrivier	Stellenbosch Taxi Association	1
40	F28a and F28b	Stellenbosch (Stelmark) - Klapmuts	Stellenbosch Taxi Association	1
41	N12	Stellenbosch (Du Toit Station) - Belville	Kayamandi Taxi Association	6
42	N42	Franschhoek – Paarl	Franschhoek Taxi Association	1
43	Q80	Kayamandi - Lwandle	Kayamandi Taxi Association	1

7.3 POLICY, LEGISLATION AND RESTRUCTURING PROPOSALS

7.3.1 Policy and Legislation

The National and Provincial legislation that controls the disposal of Operating Licences for public transport services in the Western Cape is the following:

- National Land Transport Act (No. 5 of 2009)
- Western Cape Road Transportation Amendment Act (No. 8 of 1996)
- Western Cape Road Transportation Amendment Act (No. 7 of 2000)
- Western Cape Regulations on Operating Licences. 2002
- Western Cape Regulations on the registration of mini-bus taxi associations, their members and non-members, 2007

The National Land Transport Act (NLTA) lists the responsibilities of Planning Authorities including the preparation of Integrated Transport Plans (ITP), which must be made available to the NPTR and PRE, and the making of recommendations in respect of the applications for new Operating Licences. In terms of the Minimum Requirements for the preparation of Integrated Transport Plans (Government Notice R 954, 28 November 2014), Integrated Transport Plans must include a Public Transport Plan that focuses on the integration of the public transport network, services and modes and provides the basis for the rationalization and restructuring of the public transport system. The ITP must also include an Operating Licence Plan, or Strategy, (OLS) that provides clear guidance as to which operating licence applications should be recommended or rejected as well as the conditions that should be imposed in the approval of an Operating Licence by the PRE.

Chapter 6 of the NLTA deals with the process for the application for Operating Licences for new services, contracted services, non-contracted services, renewal, amendment or transfer of Operating Licences.

Section 55 (2) of the NLTA provides that a Planning Authority must indicated if there is a need for public transport service on a route in terms of its ITP, any conditions to be attached to the application and must submit the response to the NPTR or the PRE.

The Western Cape Regulations on Operating Licences, 2002 deals with the procedure form and content of application s for Operating Licences. The regulations also deal with the submission of Operating Licence application to Planning Authorities for comment. The Regulations provide that:

- An application must be submitted in writing to the Planning Authority within 30 days of receipt
- The PRE must dispose of the application within 90 days of receipt
- The Planning Authority must:
  - Verify the route details claimed by the applicant

  - In the case of the conversion of a permit to an Operating Licence for a bigger vehicle; submit recommendations, amongst others, on the availability of ranks or terminals or other facilities or spaces for boarding or alighting from, or holding or parking the larger vehicle concerned,
  - Submit any other recommendations or representations it may have in relation to the application

- If the Planning authority fails to respond within 30 days , the PRE may consider the application without the input from the Planning Authority
- In the process of the conversion of radius or area based permits the board must adhere to the route descriptions, identifications and numbers shown in the ITP. The Planning Authority or the PRE must provide Associations operating along the route or routes in question with adequate information to allow them to give input regarding route descriptions.

7.3.2 Types of Operating Licence

Operating Licences may be issued for the following types of service:

- Contracted Services
- Non-contracted services
- Special Events
- Long distance services
- Metered taxi services
- Charter services
- Staff services
- Learner transport
- Tourist transport services

7.3.3 Restructuring of Public Transport

Integrated Transport Plans must include a Public Transport Plan that focuses on the integration of the public transport network, services and modes and provides the basis for the rationalization and restructuring of the public transport system. The public transport network should comprise a high quality network of public transport corridors as referred to in the 2007 “Public Transport Strategy and Action Plan” published by the Department of Transport as “Integrated Public Transport Network” (IPTN) plans.

The Stellenbosch Municipality intends to develop an IPTN as part of its Comprehensive Integrated Transport Plan. Initially a concept IPTN route network has been identified and is included in Chapter 6 of thee CITP. The full network and IPTN plan will however not be finalised in the current CITP but will form a part of a subsequent update of the CITP.

In the interim the conceptual IPTN route network can be taken into consideration in the awarding of Operating Licence applications by restricting the approval of new Operating Licence applications on routes likely to conflict with the future IPTN. This action will reduce the need to compensate operators for loss of business when the IPTN is implemented in the future.

A case in point is the recent application for an Operating Licence to operate a bus service between Stellenbosch and Somerset West by a private bus operator. It is perhaps premature to approve such applications in an ad-hoc manner before a plan can be formulated and new services can be contracted as part of an integrated system of routes, public transport facilities, ticketing system and the institution structure to monitor compliance. Such applications can be reconsidered at a later stage as a part of the proposed PTSN.

7.4 OPERATING LICENCE PLAN

7.4.1 Introduction

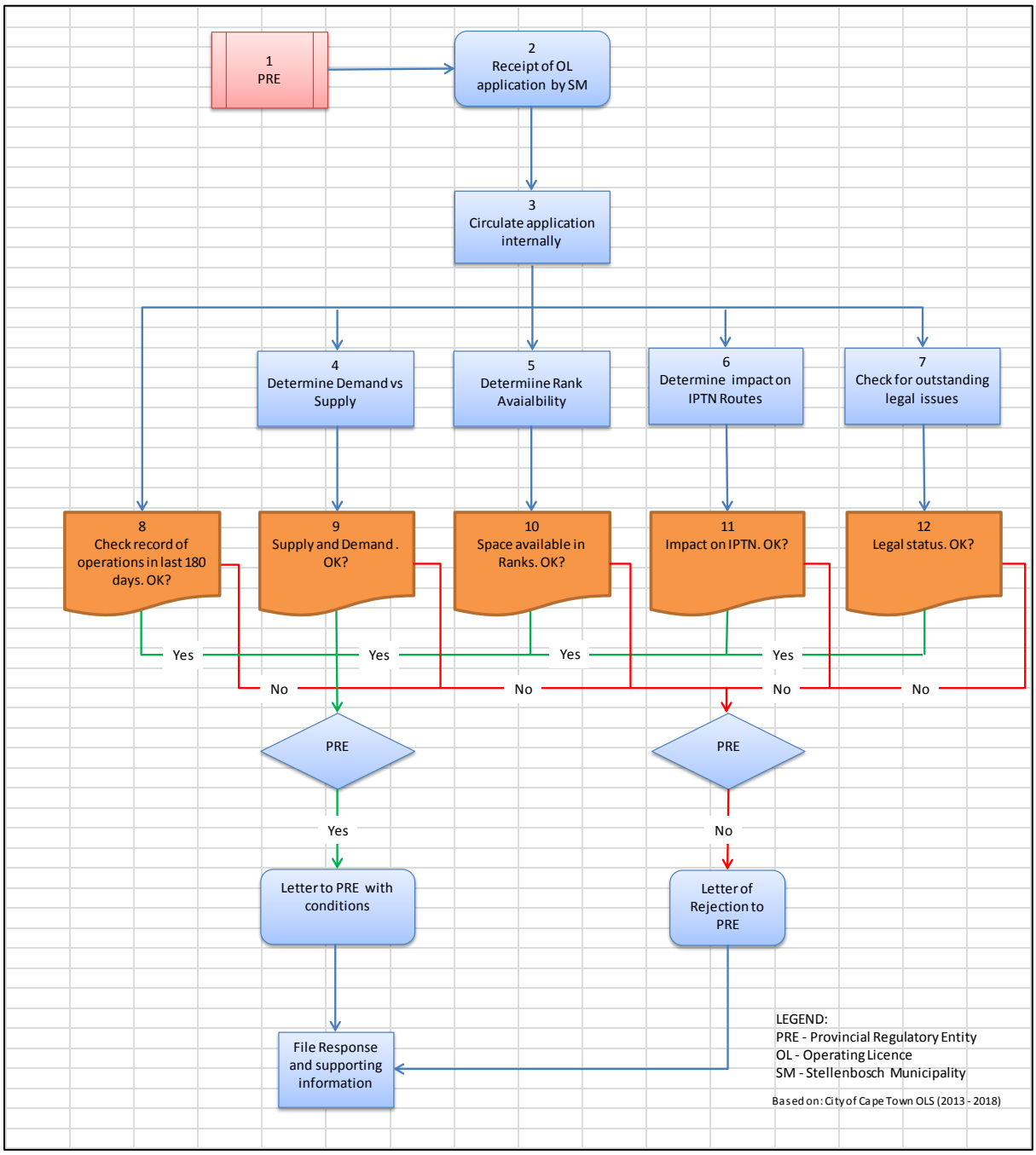
The Operating Licence Plan is intended to guide the award of Operating Licences within the Stellenbosch Municipal area and provide clear guidance to the Planning Authority as to which Operating Licence application should be approved or rejected and if approved, what conditions should be attached. The OLS should be updated annually to ensure that the details of all active Operating Licences and routes are correct at the time of the consideration of new Operating Licence applications.

The Stellenbosch Municipality has convened an Operating Licence Recommendations Committee (OLRC) to evaluate and comment on Operating Licence applications received from the Provincial Regulatory Authority. The Committee sits monthly and the Directorate Engineering Services (Transport Planning and Public Transport) and the Directorate Community and Protection Services (Traffic Services) is represented.

7.4.2 Evaluation Process

When a new application for an Operating Licence is received by the Planning Authority a process should be followed to evaluation the application. The proposed process is shown in Figure 7-3 and is described in more detail in Table 7-4 below.

Figure 7-3: Operating Licence Evaluation Process



The proposed Operating Licence evaluation procedure is described in Table 7-4.

Table 7-4: Operating Licence Evaluation Procedure

Item	Title	Procedure	Responsible Department
1.	NPTR / PRE	Application for an OL is submitted in the required format (form 2B) to the NPTR or PRE. The application is submitted to the PA (SM) within 30 days.	NPTR or PRE
2.	Receipt of OL application by SM	The OL application is received by the SM and is recorded in the appropriate manner for record purposes. The application is sent to the Directorate Engineering Services (Transport Planning and Public Transport) to be checked for completeness.	Directorate Engineering Services (Transport Planning and Public Transport)
3.	Circulate application internally	The OL is circulated to the appropriate persons / Departments internally within the SM including: Directorate Engineering Services (Transport Planning and Public Transport) Community and Protection Services (Traffic Services).	Directorate Engineering Services (Transport Planning and Public Transport)
4.	Demand and Supply	The OL application is checked against the available survey data of passenger demand on the applicable routes using the procedure detailed in Section 7.4.3. Evaluation of Supply and Demand of the OLS.	Stellenbosch Municipality Operating Licence Recommendations Committee
5.	Determine Rank Availability	The OL application is checked against the available survey data of rank, terminal or stops capacity serving the applicable routes using the procedure detailed in Section 7.4.3 Evaluation of Supply and Demand of the OLS.	Stellenbosch Municipality Operating Licence Recommendations Committee
6.	Determine impact on IPTN routes	The OL application is assessed as to its impact on the conceptual IPTN routes that are identified in the ITP, or will operate in parallel to or in conflict with any commuter rail services or bus services.	Stellenbosch Municipality Operating Licence Recommendations Committee

Item	Title	Procedure	Responsible Department
7.	Check for outstanding legal issues	The OL is checked against the record of outstanding warrants or convictions, previous convictions relating to the operation of public transport services and the ability of the applicant to operate the service in a manner satisfactory to the public.	Directorate Community and Protection Services (Traffic Services) – in respect of Traffic Offences; Provincial Regulatory Entity – in respect of criminal offences.
8.	Check record of operations in last 180 days	In terms of section 78 of the NLTA, if a licence has not been in use for more than 180 days, the licence can be cancelled. The licence holder must be asked to furnish, in writing, satisfactory reasons why the service has not been operated, after which the licence can be extended for a further 180 days or cancelled.	Directorate Community and Protection Services (Traffic Services).
9.	Letter of Approval or Rejection	If all the responses to the evaluation support the approval of the application, a letter of approval is then issued to the NPTR or the PRE with any conditions attached. If the responses do not support the application, a letter of rejection is then issued.	Directorate Engineering Services (Transport Planning and Public Transport)

7.4.3 Evaluation of Supply and Demand

Supply and Demand on Public Transport Routes:

Information on supply and demand from surveys has been used to evaluate the capacity of the current public transport services and the possible need for additional services according to the demand. The information has been summarised in Table 13-13. The table shows the following information, based on the surveys:

- The number of vehicle trips (departures) per route
- The size (passenger capacity) of the vehicle
- The number of peak hour passengers per route
- The number of vehicles operating (from the number plate surveys) with Operating Licences
- The registration number of the vehicles operating has been compared to the list of vehicles having current Operating Licences and the number of vehicles without Operating Licences was identified and indicated in Table 13-13.

From the above information, the following has been determined:

- The current service capacity: Number of vehicle trips from number plate survey x vehicle capacity (15 for a standard minibus)
- Percentage utilisation: Peak hour passenger volume from surveys / Service capacity
- Vehicles operating with Operating Licences: Comparison of the vehicle registration numbers from surveys with data from the PRE

To simplify the calculations, all routes serving common destinations have been clustered e.g. there are 12 routes serving the trip between the Bergzight taxi rank and Idas Valley. The average route distance has been determined in order to calculate the return journey time. The required number of vehicles to serve the demand based on the return journey time and the peak hour demand from the surveys can be estimated (refer to column M of Table 13-13).

The required number of vehicles can be compared to the actual number of vehicles (with Operating Licences) in operation from the surveys to determine the over or under supply of vehicles on the route (Column O of Table 13-13). Note that the vehicles without Operating Licences are excluded. An under supply indicates that certain of these vehicles could be eligible for new Operating Licences.

A comparison has also been done to determine the over or under supply of vehicles by comparing the required vehicles to serve a route to the number of vehicles that have been issues with Operating Licences on the PRE database, as well as the over and under supply including the vehicles without Operating Licences. These comparisons are summarized in Table 7-5.

Note that in several cases the surveys at public transport facilities did not register any trips on certain routes e.g. Stellenbosch to Pniel, hence the table indicates “no data”. In this particular case, a survey at the Stellenbosch Station registered trips to Pniel provided by vehicles without Operating Licences. Possibly other destinations are also served by trips that do not originate at the Bergzight rank or are provided during the off-peak.

Table 7-5: Over and Under Supply of Vehicles

Route Name	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's)	Over / Under Supply (Based on Actual OL's Issued)	Over / Under Supply (Based on Survey Including Veh. w/o OL's)
Stellenbosch - Idas Valley	9	-1	2	6
Stellenbosch - Cloetesville	12	-3	-1	3
Stellenbosch - Koelenhof	3	-3	8	-2
Stellenbosch - Vlottenburg	4	-3	0	1

Route Name	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's)	Over / Under Supply (Based on Actual OL's Issued)	Over / Under Supply (Based on Survey Including Veh. w/o OL's)
Stellenbosch - Devon Valley	2	-1	-1	1
Stellenbosch - Pniel	No Data	No Data	No Data	No Data
Stellenbosch - Kylemore	17	-11	-9	-8
Stellenbosch - Somerset West	13	-13	-8	-9
Stellenbosch - James Town	11	-9	-9	-3
Stellenbosch - Lynedoch	No Data	No Data	No Data	No Data
Stellenbosch - Elsenberg	No Data	No Data	No Data	No Data
Stellenbosch - Jonkershoek	No Data	No Data	No Data	No Data
Kayamandi - Stellenbosch	15	-14	9	10
Pniel - Paarl	11	-9	1	-7
Franschhoek - Paarl	18	-18	12	-14
Kayamandi - Stellenbosch	No Data	No Data	No Data	No Data
Stellenbosch - Kuilsrivier	No Data	No Data	No Data	No Data
Stellenbosch - Klapmuts	No Data	No Data	No Data	No Data
Kayamandi - Bellville	No Data	No Data	No Data	No Data
Kayamandi - Lwandle	No Data	No Data	No Data	No Data

Public Transport Facilities:

The primary public transport terminal in Stellenbosch is the Bergzight Terminal located on the corner of Merriman Avenue and Bird Street in the town centre. This is the only formal constructed public transport facility. Other facilities located at Kayamandi and Franschhoek are located on-street or in a layby. A new formal facility is proposed for construction at Klapmuts.

Table 7-6 indicates the utilisation of the available bays at the facilities. In some instances it was not possible to determine this information at the informal facilities as there are no marked bays.

Table 7-6: Utilisation of Facilities

No	PT facility Information		No. of Bays	Utilisation		% Utilisation
	Name	Loading/ Holding/ Combined		Max. No. of Vehicles	Time of Max. Utilisation	
1	Bergzight	Combined	45	45	16h30 - 17h30	100%
2	Kayamandi	Combined	6 (unmarked)	6	06:45 - 07:45	100%
3	Kayamandi Mall	Combined	Informal Facility			
4	Kayamandi Bridge	Combined	Informal Facility			
5	Stellenbosch Station	Combined	Informal Facility			
6	Sawmills Pick up Point	Loading	4	Facility used for pick-up and drop-off		
7	Franschhoek	Combined	5	Facility not surveyed		
8	Franschhoek Layby	Combined	8	4	16:30 - 17:30	50%
9	Klapmuts	Combined	Informal Facility			
10	Pniel	Loading	Layby on Helshoogte Rd			
11	Lanquedoc	Combined	Bays not clearly marked			

Table 7-7 indicates the routes operating from the various facilities as well as the waiting times of vehicles and passengers. The fares payable on the routes are also indicated.

Table 7-7: Routes, Ranks, Waiting Times and Fares

Route Information				Data from Surveys			
Association	Route Number	Rank	Route Name	Period	Vehicle Waiting Time (average in min)	Passenger Waiting Time (average in min)	Fare (single) Rands
Stellenbosch	630, 631, 632, 633, 634, 635 656, 657, 658, 659, 660, 661	Bergzight	Stellenbosch - Idas Valley	17:00 - 18:00	5	3	7.00
Stellenbosch	636, 637, 665, 666	Bergzight	Stellenbosch - Cloetesville	17:00 - 18:00	7	2	7.00
Stellenbosch	662	Bergzight	Stellenbosch - Koelenhof	16:30 - 17:30	16	16	10.00

Route Information				Data from Surveys			
Association	Route Number	Rank	Route Name	Period	Vehicle Waiting Time (average in min)	Passenger Waiting Time (average in min)	Fare (single) Rands
Stellenbosch	663	Bergzight	Stellenbosch - Vlottenburg	17:00 - 18:00	6	3	7.00
Stellenbosch	664	Bergzight	Stellenbosch - Devon Valley	07:00 - 08:00	9	9	8.00
Stellenbosch	667	Bergzight	Stellenbosch - Pniel	No Data	No Data	No Data	No Data
Stellenbosch	668	Bergzight	Stellenbosch - Kylemore	16:30 - 17:30	25	23	10.00
Stellenbosch	669	Bergzight	Stellenbosch - Somerset West	06:45 - 07:45	32	7	10.00
Stellenbosch	670, 671	Bergzight	Stellenbosch - James Town	08:00 - 09:00	10	9	7.50
Stellenbosch	672	Bergzight	Stellenbosch - Lynedoch	No Data	No Data	No Data	No Data
Stellenbosch	673, 674	Bergzight	Stellenbosch - Elsenberg	No Data	No Data	No Data	No Data
Stellenbosch	675	Bergzight	Stellenbosch - Jonkershoek	No Data	No Data	No Data	No Data
Kayamandi	676, 677, 722, 723	Kayamandi	Kayamandi - Stellenbosch	07:00 - 08:00	4	3	6.00
Franschhoek	754	Pniel	Pniel - Paarl	07:15 - 08:15	9	8	12.00
Franschhoek	755, 873, R13, R14, R15, R16, N42, A65	Franschhoek	Franschhoek - Paarl	16:30 - 17:30	54	9	14.00
Kayamandi	813, 814	Kayamandi	Kayamandi - Stellenbosch	No Data	No Data	No Data	No Data
Stellenbosch	A88	Bergzight	Stellenbosch - Kuilsrivier	No Data	No Data	No Data	No Data
Stellenbosch	F28	Stelmark	Stellenbosch - Klapmuts	No Data	No Data	No Data	No Data
Kaymandi	N12	Du Toit	Kayamandi – Bellville	No Data	No Data	No Data	No Data

Route Information				Data from Surveys			
Association	Route Number	Rank	Route Name	Period	Vehicle Waiting Time (average in min)	Passenger Waiting Time (average in min)	Fare (single) Rands
Kaymandi	Q80	Kayamandi	Kayamandi - Lwandle	No Data	No Data	No Data	No Data
Kaymandi	Kayamandi / Stellenbosch	Kayamandi	Kayamandi - Stellenbosch	No Data	No Data	No Data	No Data
Kaymandi	Long Distance	Kayamandi	-	No Data	No Data	No Data	No Data
Kaymandi	T46, Long Distance	Kayamandi	-	No Data	No Data	No Data	No Data
Stellenbosch	C/S, Staff, Scholars		-	No Data	No Data	No Data	No Data
Franschhoek	G57, L15, L61, L67	Franschhoek	-	No Data	No Data	No Data	No Data
Franschhoek	Organised Parties	Franschhoek	-	No Data	No Data	No Data	No Data
Stellenbosch	-	Stellenbosch Station	Stellenbosch - Pniel	07:00 - 08:00	No Data	No Data	No Data
Stellenbosch	-	Kayamandi	Stellenbosch - Somerset West	06:45 - 07:45	9	3	10.25
Stellenbosch	-	Pniel	Stellenbosch - Lynedoch	16:30 - 17:30	No Data	No Data	No Data

Future Routes:

Discussions with the Stellenbosch Municipality revealed that there are a number of new routes that are under discussion with other Authorities as well as several routes that the public transport industry have requested to be amended to improve service delivery. The new routes indicated in Table 7-8, on which additional authorities are required, are being considered.

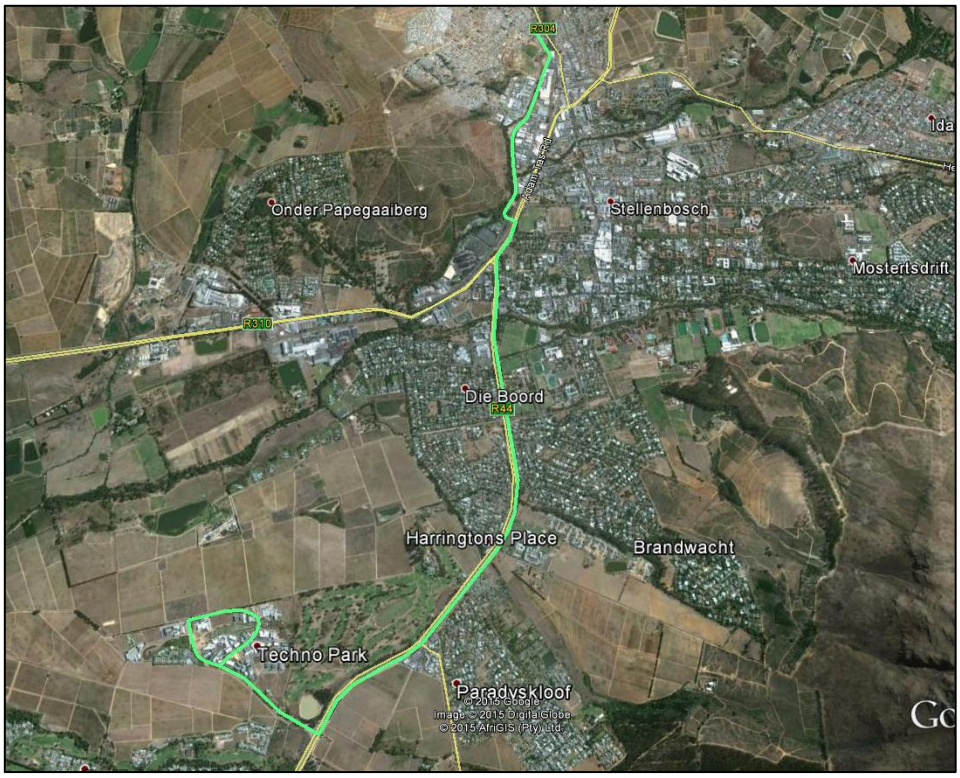
Table 7-8: New Routes (Additional Authorities Under Consideration)

No.	Route Origin	Route Destination
1	Stellenbosch	Franschhoek
2	Stellenbosch	Cape Town
3	Stellenbosch	Kuilsrivier
4	Stellenbosch	Khayelitsha

No.	Route Origin	Route Destination
5	Stellenbosch	Mfuleni
6	Stellenbosch	Eersterivier
7	Stellenbosch	Westbank
8	Stellenbosch	Delft
9	Stellenbosch	Klapmuts (there are three existing permits that are not presently being operated)

A new route between Stellenbosch to Technopark will receive consideration if an application is submitted. See Figure 7-4.

Figure 7-4: New Route – Kayamandi to Techno Park



7.4.4 Operating Licence Management System

The Provincial Regulatory Authority maintains a database of all current Operation Licences that is made available to Municipalities. The Stellenbosch Municipality has indicated that it would prefer if the PRE would provide regular feed back, on a monthly basis, of the outcome of Operating Licences that it has commented on and submitted. A copy of the latest database could then be made available as a part of the update.

To assist the OLRC in its deliberations and to assist with law enforcement, the latest database received from the PRE has been repackaged in a series of spreadsheets by means of which any registration number or operating licence number can be found. The spreadsheets also indicate the allocation of Operating Licences and the total for each route.

The spreadsheet can be updated by the OLRC when it receives monthly updates from the PRE. The spreadsheet will be made available in electronic format to the Stellenbosch Municipality for its use.

In order to rationalise the current active Operating Licences in terms of supply and demand, it is proposed that the following strategy be adopted.

- Regular surveys should be conducted to ascertain the current situation in terms of supply and demand, verify the vehicles currently in operation and identify vehicles operating without Operating Licences.
- Operating Licences not brought into use within 90 days of approval or Operating Licences not used for a period longer than 180 days be cancelled.
- Operating Licences expiring after 7 years be subject to evaluation before renewal is granted.
- No new Operating Licences be approved on routes where there is an over supply of public transport trips.
- No new Operating Licences be approved on routes intended as future IPTS routes within a period of 7 years.
- Vehicles without Operating Licences be subject to law enforcement. Such operators should be encouraged to apply for Operating Licences if required in terms of supply and demand.

7.4.5 Recommendations and Conditions of Approval

Several different types of application for Operating Licences can be submitted to the Stellenbosch Municipality that has to make recommendations for acceptance or rejection in terms of the procedure detailed above. If acceptance is recommended then it may be necessary to stipulate conditions of acceptance.

There are a number of policy issues that should be taken into consideration when evaluation Operating Licence Applications. In this regard, the City of Cape Town has adopted a comprehensive approach in the “Transport for Cape Town, Operating Licence Strategy 2013 – 2018, October 2013”. The transport systems of the Stellenbosch and Cape Town Municipalities are interlinked as a part of the functional region and reference should be made to the Transport for Cape Town approach, as detailed in the TCT OLS when considering Operating Licence applications.

Policy issues and conditions of acceptance as adopted by the TCT are summarized for use by the Stellenbosch Municipality in Table 7-10 that sets out the different types of application and provides typical conditions that may be applied to acceptance of Operating Licences.

Table 7-9 provides an index of Operating Licence conditions that can be imposed in respect of specific types of application.

Table 7-9: Summary of Operating Licence Conditions contained in Table 7-10

No.	Type of OL Application	
1.	Existing Permits	Conversion of a Permit to an OL
2.	Non-contracted Services	General Requirements:
2.1	Non-contracted Services	Transfer of an OL:
2.2	Non-contracted Services	Renewal of an OL
2.3	Non-contracted Services	Amendment of an OL: Replacement of Specified Vehicle
2.4	Non-contracted Services	Amendment of an OL: Application for Additional Authority
2.5	Non-contracted Services	New OL for Unscheduled Minibus Services: Existing Minibus Routes
2.6	Non-contracted Services	New OL for Unscheduled Minibus Services: New Minibus Routes
2.7	Non-contracted Services	Renewal, amendment or transfer of an OL for a non-contacted service.
3.	Learner Services	
4.	Staff Services	
5.	Long Distance Services	
6.	Metered Taxi Services	
7.	Charter Service	
8.	Tourist Services	
9.	Contracted Services	
10.	Special Events and Major Special Events	
11.	Courtesy Services	

Table 7-10: Matters to be considered when evaluating an OL Application

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
1.	Existing Permits	Conversion of a Permit to an OL	Permits (route or area based) expire on 9 April 2016 (7 years after the effective date of the NLA – section 47(2)) and must be converted to an OL before this date. Matters to be considered in evaluating an application: If the service authorised by the permit has been provided on a regular basis within the last 180 days prior to the date of application for conversion by the vehicle linked to that particular permit (NLTA Section 78); An exception will be made in cases where an application for the replacement of the vehicle linked to the permit is pending with the RE. In such cases the SM will confirm operation within the last 180 days even though the service had been provided with the new vehicle. However, this exception will only be made if the service was provided for a continuous period during the transition from the old to the new vehicle. Applications where there has been a break in service of more than 180 days will not be supported by the SM; If the applicant has not been providing a regular service on all the routes authorised by the permit, the SM will only support the conversion for the routes that have been regularly served by the applicant; The application for the conversion of the permit to an OL will only be supported by the SM if the applicant is still a registered member of the resident association on the route(s) authorised by the permit or in the case of a conversion from radius to route, a member of the resident association on the route(s) for which application is made; In the case of the conversion of a radius permit, the routes applied for must fall within the specified radius unless it can be demonstrated that the applicant forms part of the existing capacity on a route and that he/she is a member of that association. In cases where a route for which application is made is considered to be contentious or where there is a possibility that the route could perpetuate conflict, the SM will refuse the application; No application for a change in A-point will be supported by the SM as part of the conversion process unless it can be demonstrated that the existing A-point is not an official rank and that the safety of passengers will be compromised if they are loaded at the existing A-point. Under no circumstances will applicants be allowed to trade a permit (which has not been successfully converted to an OL) for a new application on a particular route. The SM proposes that the RE imposes at least the following conditions: The OL to which the permit is converted explicitly stipulates ranks or terminals or other facilities or spaces where loading/ranking can take place and facilities where passengers may only be set down; That the OL is brought into use within 90 days or advance good reasons for not having commenced operations within

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			that period. In the case of an operating licence with multiple routes, the service must be provided on all the routes authorised by the OL; That the authorised vehicle, whilst in a public transport facility including a holding area that is provided by the SM, is operated in accordance with the Traffic By-law. That the operator obtains a rank token from the SM before they can uplift the OL; That the operator signs an agreement with the SM for the use of the facility before they can uplift the operating licence; In the case of converting permits to OL's for long distance services, the SM will require the RE to also impose the condition that all buses providing long distance services operate from a facility approved by the SM.
2.	Non-contracted Services	General Requirements:	Matters to be considered in evaluating an application: The service is encapsulated in the SM's ITP. (NLTA Section 57 (1) (a)); The vehicle by means of which the service is to be operated is suitable for that purpose (NLTA Section 57 (1) (b)); Official ranks or official terminals or other facilities or spaces for boarding or alighting and for holding or parking vehicles engaged in the operation of that service are available (NLTA Section 57 (1) (c)); Compliance with the SM's by-laws and any regulations, prohibitions, limitations or restrictions (NLTA Section 57 (1) (d)); The SM knows of no previous convictions of the applicant for any offences of the type and seriousness as prescribed in the Western Cape Regulations on Operating Licences, 2002 and the NLTA Section 57 (1) (e) and NLTA Regulation (18); and The SM considers that the applicant has the ability to operate the service in a manner satisfactory to the public (NLTA Section 57 (1) (f)).
2.1	Non-contracted Services	Transfer of an OL:	The transfer of any OL will only be supported by the SM if converted to a definite OL (NLTA Section 58 (2)); Operators are not allowed to trade any OL's for new applications; The service authorised by the OL to be transferred must have been provided on a regular basis (by the vehicle linked to the OL) for a period of at least 180 days before the date of application (Western Cape Regulations on Operating Licences, Regulation 5 (2) (a)) and Section 49 (2)(b) of the NLTA. The SM will only support applications for the transfer of an OL in cases where it has issued a statement confirming operation within the last 180 days. This confirmation letter will normally be issued before the application is referred to the SM in terms of Section 55 (1) of the NLTA in consultation with the WC PLTF or Provincial Taxi Plan. The Western Cape Regulations on Operating Licences

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			require an applicant to submit a 180-day confirmation letter from the PA together with the normal application form; Where the holder of an existing OL has not been providing a regular service on all the routes authorised by the OL, the SM will only support the transfer of routes that have been regularly operated within 180 days. In other words, no dormant routes will be supported as part of the transfer process; The SM will only support an application if the OL is transferred to a member of the same association or subject to membership of that association; In the case of a transfer of a radius permit, the conversion from radius to route must be done simultaneously; and Where route descriptions are vague, the SM will recommend to the RE that applicants will be required to submit detailed route descriptions to supplement applications for consideration.
2.2	Non-contracted Services	Renewal of an OL	Where a renewal of an OL conflicts with a proposed IPTN route, the renewal should not be considered in order to facilitate the future introduction of IPTN services. No late renewals (NLTA Regulation 25) will be considered by the SM; Whether the service authorised by the OL to be renewed has been provided on a regular basis (by the vehicle linked to the OL) for a period of at least 180 days before the date of application (Western Cape Regulations on Operating Licences, Regulation 5 (2) (a)) and Section 49 (2)(b) of the NLTA. The SM will only support applications for the renewal of an OL in cases where it has issued a statement confirming operation within the last 180 days. This confirmation letter will normally be issued before the application is referred to the SM in terms of Section 55 (1) of the NLTA in consultation with the PLTF and Provincial Taxi Plan. The Western Cape Regulations on Operating Licences require an applicant to submit a 180-day confirmation letter from the PA together with the normal application form; Where the applicant has not been providing a regular service on all the routes authorised by the OL, the SM will only support the renewal of the OL for routes that have been regularly served by the applicant. In other words, no dormant routes will be supported as part of the renewal process; Where route descriptions are vague, the SM will direct/recommend to the RE that applicants be required to submit detailed route by route descriptions to supplement applications for consideration; In the case where the minibus taxi mode is considered the appropriate mode on the route or routes linked to the OL the SM will only object to the renewal of the minibus taxi OL if the applicable route/s has sufficient capacity to cater for commuter demand on the route; Current and envisaged trends in utilisation on the route or routes, or where applicable, in the particular area concerned. Where there is significant overtrading on a particular route, the application for the renewal of fixed-period licences will not be supported by the SM;

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			Whether the applicant has furnished the SM with a letter of support, and minutes of the general meeting, including a signed attendance register, in which the members of the association resolved to support the application, from the resident association on the route(s) authorised by the OL; In the case where an operator has operated contrary to their OL conditions, the renewal of the OL will not be supported by the SM; and. A demerit system will be introduced by the SM to determine if the service linked to the OL had been operated in a manner satisfactory to the public. This system will be used as a measurement to formulate the SM's responses on applications for the renewal of OL.
2.3	Non-contracted Services	Amendment of an OL: Replacement of Specified Vehicle	(This is to address cases where an OL is “rented out” to another operator with a different vehicle) Matters to be considered in evaluating an application: Whether the service authorised by the OL has been provided on a regular basis (by the existing vehicle linked to the operating licence) for a period of at least 180 days before the date of application (Western Cape Regulations on Operating Licences, Regulation 5 (2) (a)) and Section 49 (2)(b) of the NLTA. The SM will only support applications for the replacement of vehicles in cases where it has issued a statement confirming operation within the last 180 days. This confirmation letter will normally be issued before the application is referred to the SM in terms of Section 55 (1) of the NLTA in consultation with the WC PLTF and Provincial Taxi Plan. The Western Cape Regulations on Operating Licences require an applicant to submit a 180-day confirmation letter from the PA together with the normal application form. A replacement will not be supported if it is the view of the SM that the OL is dormant; A eNATIS check should be carried out or a certified copy of the registration documents be supplied by a dedicated official at the RE, and a report from the RE on the last three (3) transactions made in order to establish if the existing (old) vehicle was registered in the name of the OL holder during the six month period prior to the date of application. If it is found that the old vehicle had been sold during this period (and possibly linked to another operating licence), a letter confirming operation within the last 180 days will not be issued by the SM; Replacing of a scrapped vehicle will only be considered if proof of 180 day operations is provided on all applicable services authorised by the OL; The replacing vehicle should not be linked to another OL. In such cases the applicant must submit proof from the RE that the vehicle is no longer linked to an OL; The new vehicle must be registered in the name of the OL holder; The replacing vehicle must have approximately the same passenger capacity (not more than twenty percent 20%), or

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			less, and should be of the same nature as the vehicle which it replaces. Any increase in vehicle capacity more than 20% will require a new application; Where it is the applicant's request to replace the existing vehicle with a bigger vehicle (irrespective of seating configuration), the SM will only support the application if the both A & B point facilities has been designed to accommodate the bigger vehicle; The quality and standard of the service (authorised by the OL) should not be compromised by the replacing vehicle; The replacing vehicle should be suitable for the operation of the public transport service authorised by that OL, and must be certified as roadworthy in compliance with road traffic laws and appropriately licenced; Where it is established that the operator had operated contrary to the conditions of their OL, the application will not be supported by the SM; If the application is granted by the RE, the SM will direct to the RE that the applicant: Surrender the replaced operating licence to the RE; and Completely remove all distinguishing marks related to the replaced OL and hand in such markings to the RE and present the new vehicle for inspection by an official of the RE's Inspectorate.
2.4	Non-contracted Services	Amendment of an OL: Application for Additional Authority	(In cases where an Association operates a route network and members apply to operate all routes in that network) Matters to be considered in evaluating an application: The balance between the supply and demand of minibus taxi services on the route as well as other public transport modes; Whether no spare capacity exists in parallel, on the subsidised rail and bus corridors; Whether the service authorised by the OL has been provided on a regular basis (by the existing vehicle linked to the OL) for a period of at least 180 days before the date of application (Western Cape Regulations on Operating Licences, Regulation 5 (2) (a)))) and Section 49 (2)(b) of the NLTA. The SM will only support applications for the replacement of vehicles in cases where it has issued a statement confirming operation within the last 180 days. This confirmation letter will normally be issued before the application is referred to the SM in terms of section 55 (1) of the NLTA in consultation with the WC PLTF or the Provincial Taxi Plan. The Western Cape Regulations on Operating Licences require an applicant to submit a 180-day confirmation letter from the PA together with the normal application form. Additional routes will not be supported if in the view of the SM the OL is dormant; Where the additional route is registered in the name of the same association; Whether the applicant has furnished the SM with a letter of support, and minutes of the general meeting, including a

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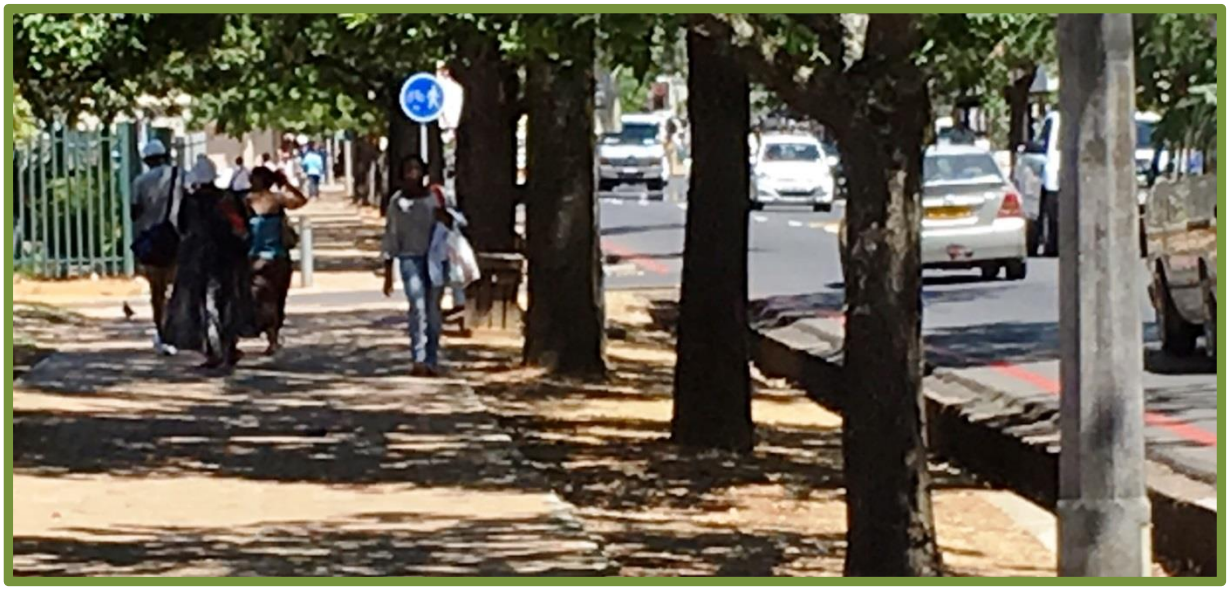
COMPREHENSIVE INTEGRATED TRANSPORT PLAN

PART 3 OF 4

2016 – 2020



Final Report for Council Approval:

12 February 2016

Royal HaskoningDHV
Enhancing Society Together

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			signed attendance register, in which the members of the association resolved to support the application, from the resident association on the route(s) authorised by the OL; Where the granting of the additional authority could result in conflict between associations and operators. Where there is a real possibility of conflict, the application will not be supported by the SM; All applications for additional authority must indicate the A-point, as the origin of the route in the weekday morning peak period, and B-point, as the destination of the route in the weekday morning peak period, of the routes.); Where the additional route would result in more than one A-point, the application will not be supported. Where the granting of the application will result in more than one association serving the same route, the application will not be supported. An exception will only be made where there is already more than one association serving a particular route In the case of long distance applications: - The applicant must be a member of the applicable association; - Operations should be centralised at the approved long distance facilities; and - Only if sufficient demand exists on that route. The SM will further direct the RE not to issue different authorities on the same operating licence (e.g. Charter and minibus-taxi type services). This practice makes enforcement extremely difficult and serves as an impediment to the effective management and regulation of the system.
2.5	Non-contracted Services	New OL for Unscheduled Minibus Services: Existing Minibus Routes	This type of application should only be considered if it does not conflict with a proposed IPTN route of if there is a genuine need in terms of supply and demand or if it is for a non IPTS community service). Matters to be considered in evaluating an application: The route is not adequately served by an existing public transport service. The supply and demand criteria should be applied; The service will not result, in the SM's opinion, in wasteful competition with existing or planned contracted services; The applicant is a member of the resident association on that route and that the granting of the application will not lead to more than one association operating on the same route. An exemption from this requirement will be allowed where there are already two or more associations registered for the same route; Whether the applicant has furnished the SM with a letter of support, and minutes of the general meeting, including a

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			signed attendance register, in which the members of the association resolved to support the application, from the resident association on the route(s) authorised by the OL; The application does not contain more than one A-point All applications for additional authority must indicate the A-point, as the origin of the route in the weekday morning peak period, and B-point, as the destination of the route in the weekday morning peak period, of the routes.) Other prerequisites for the SM's support include: Operators are not permitted to trade any OL's for new applications; Permits which have not been successfully converted to OL's may under no circumstances be traded for new applications; Whether the service authorised by the OL has been provided on a regular basis (by the existing vehicle linked to the OL) for a period of at least 180 days before the date of application (Western Cape Regulations on Operating Licences, Regulation 5 (2) (a)))) and Section 49 (2)(b) of the NLTA. The SM will only support applications for the replacement of vehicles in cases where it has issued a statement confirming operation within the last 180 days. This confirmation letter will normally be issued before the application is referred to the SM in terms of section 55 (1) of the NLTA in consultation with the WC PLTF or the Provincial Taxi Plan. The Western Cape Regulations on Operating Licences require an applicant to submit a 180-day confirmation letter from the PA together with the normal application form; Operators will not be allowed to trade dormant OL for new applications on the same route; When deciding to support a new application on a particular route, illegal operators who have formed part of the existing capacity for more than three years should be given preference; Existing permits/OL's for other types of services (contract, scholar, etc.) may under no circumstances be traded for OL for minibus taxi-type services; and Where operators have joined another association, they must hand in any OL's for routes registered under that association before any new applications are considered.
2.6	Non-contracted Services	New OL for Unscheduled Minibus Services: New Minibus Routes	In situations where there are new residential or business developments, the need for new public transport services and routes should be determined by means of a public transport assessment (NLTA, section 38 (2)). These new services should preferable be implemented in terms of a new contracted service with the appropriate level of service and vehicle type. This will promote the implementation of the principle of the provision of an IPTN.

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
2.7	Non-contracted Services	Renewal, amendment or transfer of an OL for a non-contacted service.	Matters to be considered in evaluating an application: That the OL explicitly stipulates official ranks or official terminals or other facilities or spaces where loading/ranking can take place and facilities where passengers may only be set down; That the OL is brought into use within 90 days of upliftment or advance good reasons for not having commenced operations within that period (NLTA Sections 47 (3) and 49 (2) (b). In the case of an OL with multiple routes, the service must be provided on all the routes authorised by the OL; That the authorised vehicle, whilst in a public transport facility including a holding area that is provided by the SM, is operated in accordance with any management procedures and/or regulations and/or by-laws that the SM has put in place at that facility and that the SM reserves the right to suspend the operator's rank token in the event of non-compliance to these procedures and/or regulations and/or by- laws; That the operator obtains a rank token from the SM after the OL is uplifted; That the operator signs an agreement with the SM for the use of the facility the OL can be uplifted. That the SM is not liable to pay any compensation should the need arise to withdraw the licence before the expiry date, in line with the implementation of the IPTN; In determining the period of an OL for non-contracted public transport services, the SM will have due regard to: - Current and envisaged trends in utilisation on the route or routes, or where applicable, in the particular area concerned; - The efficiency of the proposed services in meeting user needs; - The likelihood that in future, the public transport service with regard to which the application for an operating licence is made, may no longer be required in terms of the ITP and IPTN; and - Applicants for various OL transactions within this category are reminded that the likelihood that the public transport service with regard to which application for an operating licence is made, may become the subject of a commercial service contract or a subsidised service contract in the future. Applicants will be duly informed by the SM; and Where route descriptions are vague, the SM will direct to the RE that applicants be required to submit detailed route by route descriptions to supplement applications for consideration.
3.	Learner Services		In terms of Section 72 of the NLTA the conveyance of learners, students, teachers, and lecturers to or from a school or any other educational institution on a daily basis, is regarded as a public transport service and as such an OL is required.

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			Matters to be considered in evaluating an application: The contract between the operator and the school or other educational institution or department or certified copy thereof, or a letter from the principle or authorised administrative officer of such an institution approving the operator and the transport is in order; The route description is in sufficient detail and the route/routes is/are not in conflict with the transport plans for the area nor impinge on or are in direct competition with any other public transport service lawfully provided by other types of public transport; The vehicle type, capacity and standard thereof is adequate to transport scholars; and an area not on busy public roads where scholars may be picked up or set down is available and that roads to be crossed by the scholars to be picked up or set down are safe. The SM will further direct that the RE impose the following conditions on the OL some of which are legislated in NLTA Regulation 42: The validity period of this specific OL will be 12 months from the date of issuing or until the SM's CITP has been concluded by the SM, whichever comes first, after which it will lapse and a new application and contract will be required; That none of the SM's official transport facilities are used by the operator; The vehicle may only carry a maximum of XXX passengers at any given time even though the capacity of the vehicle is greater; That the OL will be withdrawn if mainstream public transport services are introduced in the future. Furthermore, in line with the restructuring and transformation of public transport services, the SM will not be held liable for the payment of compensation if the OL is withdrawn before the expiry date; All schools and other institutions must provide loading areas that are not on busy public roads where scholars and students may be picked up or set down by motor vehicles (Refer to NLTA regulation 42 (8); The operator to install a tracking device system in the vehicle (Refer to NLTA regulation (42d); All vehicles used for scholar transport must: be marked in the manner prescribed or required by the relevant regulatory entity to indicate that scholars or students are being carried; and

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			- have a first aid kid in the vehicle at all times that complies with prescribed requirements or those stipulated by the regulatory entity (NLTA regulation 42 (4 a & b); All drivers engaged in scholar transport must be issued by the regulatory entity with a special identity card with feature designed to ensure that it is not possible to be forged, containing at least the following information: - full names and identity number of the driver; - name of the operator; - full, recent colour photograph of the driver; and - the code indicating the type of vehicle that the driver may drive. (NLTA regulation 6a-d); and Strict adherence at all times by the operator and driver of the public transport vehicle of the applicable SM Traffic By-Law.
4.	Staff Services		The transport of staff between their residence and place of work should preferably be by normal public transport services. When these services cannot accommodate staff trips, e.g. shift workers travelling outside normal operating hours, this type of application can be considered. Matters to be considered in evaluating an application: Whether there is a signed written contract between the employer and the operator; Whether the proposed service will operate outside the core business hours for public transport where the service is not in direct competition with existing service; Whether the vehicle is linked to an authority for minibus taxi-type services. The SM requires dedicated operators for this type of service; Whether the vehicle is suitable for the provision of a public transport service; Whether a detailed route description has been submitted for evaluation; Whether the times of operation have been clearly stipulated on the application; and Whether the name(s) of the company/ies to be served have been clearly listed on the application. The SM will further request that the RE impose the following conditions on the OL: That the validity period of the OL is less than or equal to that of the contract; That the operator submits proof of passenger liability insurance; That the authorised vehicle is clearly marked with the name, address, and nature of the business of the holder of the

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			OL on both front doors of the vehicle; That none of the SM's official public transport facilities are used by the operator; That the OL is brought into use within 90 days of collection at the RE; That the OL will be withdrawn if mainstream public transport services are introduced in the future; and That the SM is not liable to pay compensation if the OL is withdrawn before the expiry date, in line with the restructuring and transformation of public transport services.
5.	Long Distance Services		Long Distance Minibus Services: The demand for long distance services normally diminishes after the peak holiday season, resulting in an oversupply of vehicles on long distance routes. As a result these operators tend to impinge on other existing commuter routes, causing conflict. Existing operators who apply for additional authority to operate on the long distance routes in terms of Section 65 of the NLTA should be supported. These operators can revert back to the local routes when the demand on the long distance routes diminishes. It also allows the association to rotate operators on both the local and long distance routes to alleviate some of the overtrading taking place on the local routes. The SM receives, from time to time, applications that have been submitted in other Provinces that apply to operate to destinations in the SM's jurisdiction. The SM requires that the applicable RE ensure that a detailed route description with a specific facility as end destination be supplied for the section of the route within the SM's jurisdiction. In the absence of the required information, the SM will unfortunately not be in a position to make informed decisions in order to support any applications for new operating licences or the renewal thereof and these applications will then be refused. Matters to be considered in evaluating an application: Whether the operator has an existing operating licence for one of the local routes; Whether the local service authorised by the OL has been provided on a regular basis for a period of at least 180 days before the date of application for the long distance route; Whether the operator is a member of the resident long distance association and has furnished the SM with a letter of support, and minutes of the general meeting, including a signed attendance register, in which the members of the association resolved to support the application, from the resident association on the route(s) authorised by the operating licence;

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			Whether the application is for one of the official long distance facilities; Whether there is concurrence from the PA at the destination point of the route(s); Whether a detailed route description has been submitted for evaluation; Whether the vehicle is suitable for long distance services. In future only recapitalised vehicles will be allowed for long distance minibus taxi services; Whether the application clearly stipulates where passengers will be picked up or set down and Whether the demand for the service is justified from a passenger perspective. Scheduled Bus Services: Whether the demand for the service is justified from a user perspective; Whether the vehicle is suitable for public transport services; Whether there is concurrence from the planning authority at the destination point of the route(s); Whether a detailed route description has been submitted for evaluation; Whether the vehicle is suitable for long distance services; and Whether the application clearly stipulates where passengers will be picked up or set down. The SM will further direct that the RE impose the following conditions on the OL: That the operator keeps a log book of all long distance journeys; That the OL is brought into use within 90 days or advance good reasons for not having commenced operations within that period. In the case of an operating licence with multiple routes, the service must be provided on all the routes authorised by the OL; That the authorised vehicle, whilst in a public transport facility including a holding area that is provided by the SM, is operated in accordance with any management procedures and/or regulations that the SM has put in place at that facility and that the SM reserves the right to suspend the operator's ranking rights in the event of non-adherence to these procedures and/ or regulations; That the operator obtains a rank token from the SM before they can uplift the OL; That the operator signs an agreement with the SM for the use of the facility before they can uplift the OL; That the OL is granted only for the validity period of the rank token; That the operator submits proof of passenger liability insurance;

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			That the operating licence clearly stipulates where passengers may be loaded and where passengers may only be set down; and That passengers may not be picked up or set down en-route unless the operator has reached agreement in this regard with the City of Cape Town and with the taxi associations operating locally in the area.
6.	Metered Taxi Services		Matters to be considered in evaluating an application: Whether there is a demand for the service; The availability of other services of a similar nature and standard; Whether there is ranking space available (in the case of rank operators); and Whether the vehicle is suitable for operation of a metered taxi service. The SM will not support an application to grant an OL for a metered taxi service if it is operated by a vehicle designed, or lawfully adapted by a registered manufacturer, to carry more than seven passengers plus the driver. The SM will further direct that the RE impose the following conditions on the OL: The name of the base rank, base area or base address from which the metered taxi operates and the pick-up radius must be marked on both front doors of the authorised vehicle with wording to be approved by the SM in addition to the name, address and nature of business of the holder of the OL; The driver of the authorised vehicle shall have successfully completed a training programme recognised by the SM; The scale of charges shall be displayed on both front and back doors of the vehicle; The fare shall be calculated from the time the passenger enters the metered taxi. No charges shall be made from the passenger's destination back to the rank or depot; The service authorised by the OL must commence within 90 days of the date of collection of the OL from the RE; That the operator obtains a rank token from the SM before they can uplift the OL (only in the case of official ranks); That the operator signs an agreement with the SM for the use of the facility before they can uplift the OL; That the operator submits proof of passenger liability insurance; and That the vehicle is fitted with a sealed, working, and properly calibrated taxi fare meter. (Refer to NLTA Sec 66 (2)).
7.	Charter Service		The NLTA defines a "charter service" as a means of a public transport service operated by road involving the hire of a vehicle and a driver for a journey at a charge arranged beforehand with the operator, where –

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			(a) neither the operator nor the driver charges the passengers individual fares; (b) the person hiring the service has the right to decide the route, date and time of travel; and (c) the passengers are conveyed to a common destination, and includes vehicles hired with drivers contemplated in section 67;" (NLTA, 2009) Matters to be considered in evaluating an application: The charter service applied for meets the criteria as per the definition of a chartered service and provisions of Section 67 in the NLTA; The charter service applied for should not rather be provided as metered taxi service; The vehicle or vehicle type is suitable as per Section 57(1)(b) of the NLTA in terms of reliability, convenience, affordability and passenger safety for the purpose of providing a chartered service; and The applicant is able to operate a charter service in a matter satisfactory to the public. The SM will direct that the following conditions to be added on to the OL: This specific OL will only be valid for a period of 12 months from the date of issuing after which it will lapse and a new application will be required; The vehicle may only carry a maximum of XXX passengers at any given time even though the capacity of the vehicle is greater; The operator is required to protect the passengers through the provision of adequate liability insurance cover; The OL must stipulate that the vehicle must be marked with the name and address of the operator as well as the type of service provided; and Strict adherence at all times by the operator and driver of the public transport vehicle to the applicable Traffic By-Law.
8.	Tourist Services		The NLTA defines a "tourist transport service" as a scheduled, unscheduled or charted public transport service by road for the carriage of tourists to and from tourist attractions according to a predetermined itinerary, and includes transfers of tourists, for example from hotels to and from airports." (NLTA, 2009) Matters to be considered in evaluating an application:

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			That the operator is fit and proper in terms of Section 81(2)(a) of the NLTA to transport tourists in a manner that is safe and will promote South Africa as a tourist destination; That the operator meets all the prescribed technical requirements in terms of Section 81(2)(b) of the NLTA; That the operator has access to acceptable vehicles and maintenance facilities in terms of Section 81(2)(c) of the NLTA; That the prescribed matters (criteria) in terms of Section 81(3) of the NLTA has been met: That the proposed tourist service does not impinge on any other public transport services lawfully provided by other types of public transport; The applicant is a properly qualified tour operator; and A qualified tour guide shall accompany the tourists at all times; and A detailed route description (itinerary) has been provided. The tourist services operator may operate a maximum of XX class XX vehicles in terms of Section 81(4) of the NLTA. The tourist service operator has the required recommendations from the local tourism authorities or authorities recognised by the Minister as required in terms of Section 81(5) of the NLTA; That the operator is registered as an accredited tourist operators in terms of Section 81(7) of the NLTA; The operator is fit and proper in terms of Section 82(2) of the NLTA to provide the proposed tourist service; and The vehicle or vehicle type is suitable as per Section 84(3)(b) of the NLTA in terms of reliability, convenience, affordability and passenger safety for the purpose of providing a tourist service. The SM will direct that the following conditions to be added on to the OL: The granting of this specific OL will only be valid for a period of 12 months from the date of issuing or until the SM's CITP has been concluded by the SM, whichever comes first, after which it will lapse and a new application will be required; Certified tourist transport vehicle to display special token, tag, or equipment as prescribed in NLTA Regulation 35; A clearly stated prohibition on the provision of shuttle or pre-booked transfer services; The nature of the service must be specified on the operating licence and vehicle; The tour guide must display the prescribed name badge whilst in the vehicle; The operator maintains, for the period of the operating licence, appropriate passenger liability insurance; That the SM is not liable to pay compensation if the OL is withdrawn before the expiry date in line with any restructuring

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			and transformation of public transport service; and Accredited operator must renew their accreditation every five years in the prescribed manner, falling which their accreditation will lapse (NLTA Section 81 (8)).
9.	Contracted Services		OL's for contracted services must be granted or renewed by the RE for any negotiated, subsidised, or commercial service contract awarded by a competent contracting authority (as defined in the NLTA) for services to be provided within the SM. The licences may only be granted for the duration of the contract and are subject to the terms and conditions of the contract (NLTA, Chapter 5). Section 56 and NLTA Regulation 16 specifically deal with matters relating to the issuing of OL's for this type of service. The Western Cape Regulations on Operating Licences, 2002 (Section 4) require that the application for the Licences must be submitted with written confirmation from the relevant contracting authority that the contract has been properly concluded. The regulations also require the RE to submit copies of the application to the SM and that the SM should: Submit direction to the RE on the availability and improvement needs of terminals and bus stop facilities on the routes for boarding or alighting of passengers. Confirm whether it supports the application in terms of its ITP; and Submit any directions it may have in relation to the applications.
10.	Special Events and Major Special Events		Sections 60 and 61, of the NLTA, and NLTA Regulation 20, deal with issues surrounding the application and granting of temporary Licences for special and major special events. Temporary special event Licences will only be issued (a) if existing authorities and services are not sufficient to meet the estimated demand (b) that existing services are not disrupted or prejudiced, and (c) other prescribed criteria have been met. The SM, on evaluating such application, will need to consider the above and, for special events within the SM, the relevant Traffic Management Plans (TMP) that are prepared for such special event.
11.	Courtesy Services		A courtesy service is defined in the NLTA as follows: "courtesy service" means a service provided by or on behalf of an organisation such as an hotel, which is not an operator, for its customers or clients, either by means of its own vehicle or the vehicle of an operator in terms of an

No.	Type of OL Application		Matters to be Considered and Typical Conditions of Approval
			agreement with that organisation, with no direct charge to the passengers;" (NLTA, 2009) Section 53 (1) (a) exempts courtesy services from needing an OL if the operator operates less than the prescribed number of and type of vehicles. Regulation 29 prescribes that a maximum of two motor cars can be exempt from applying for OL's. However, if minibuses, midibuses, and buses are used they will need to be in possession of licences application for which must be done through the relevant RE. In addition, NLTA Regulation 29(3) requires that operators of exempted courtesy services need to notify and register as an operator with the NPTR. The NPTR must then notify the relevant PRE and PA of such services. In terms of the above legislation the SM does not have any input into the registration for these exempted services. However, where the operator requires a Licence/s the SM must direct the RE in accordance with its ITP in terms of Section 55 of the NLTA. In evaluating such applications the SM must consider: Whether there is a demand for the service; Carefully evaluate the objective behind the provision of the service to ensure that it does not negatively impact on the viability of other existing services; The availability of other services of a similar nature and standard; Whether there is space available for the vehicle/s to stop and off-load passengers; and Whether the vehicle is suitable for operation of a courtesy service

Source: Transport for Cape Town, Operating Licence Strategy 2013 – 2018, October 2013

7.4.6 Electronic Hailing Services

Introduction:

An electronic hailing (e-hailing) service is one whereby a public transport service can be ordered by a user by means of an e-hailing application ("app"), typically installed on a smart phone, and has the facility to estimate distances and fares, to communicate this estimate to the user in advance and to calculate the final fare at the end of the trip.

Since its inception, there have been difficulties dealing with applications for Operating Licences for e-hailing taxi services for various reasons such as:

- The National Land Transport Act does not specifically cater for such services
- They are seen as competition to existing metered taxi services
- Some drivers operate without the necessary documentation

The PRE in the Western Cape has recently granted several applications for Operating Licences for metered taxi services in Cape Town using a propriety software application that enables e-hailing and has imposed conditions of approval that include inputs from the Planning Authority – City of Cape Town.

Legislation and Regulation:

No road based public transport service may be operated without an Operating Licence issued in terms of the National Land Transport Act (NLTA) (section 50). Applications for Operating Licences for e-hailing services are currently being dealt with by the PRE as a metered taxi service as defined in section 66 of the National Land Transport Act. The PRE may impose conditions on the granting of an Operating Licence pertaining to the area in which passengers may be picked up, the fare structure as well as any other matter affecting the standard and quality of the service. Planning Authorities must indicate to the PRE whether there is a need for new public transport service based on their Integrated Transport Plans or if the Integrated Transport Plan has not been finalised or is inadequate, it must take a decision based on due inquiries or investigations carried out by it (section 55(2)(a) of the NLTA).

Conditions of Approval:

E-hailing services are a new phenomenon and it is difficult to predict their popularity and the demand for such a service. The City of Cape Town stipulated a requirement for the submission of an application for an Operating Licence that the prospective operator must submit a business plan to substantiate their application. The City of Cape Town concluded that e-hailing is a distinctive market and would not result in a mass migration of users from the current metered taxi industry.

The City of Cape Town required that the following generic conditions of approval be imposed as part of the conditions imposed by the PRE in the approval of Operating Licences for e-hailing taxi services:

- It is a strict condition that if the operating licence is not uplifted within the prescribed time frames; then the Planning Authority's support of the operating licence will lapse and the applicant will not be eligible to re-apply for the operating licence and a 12 month waiting period will then automatically apply;
- The service authorised by this operating licence is solely that of an on-demand service achieved by means of electronic hailing while roaming;
- Waiting or plying for hire in any private or public road (regardless of classification), dedicated public transport right of way or stop, private or public parking areas – demarcated or not, bus, metered taxi, disabled, aged, child or any other areas – demarcated or not - is strictly forbidden;
- When the vehicle is not in service it must be parked off street at the base as indicated in the area of operation;
- Should the address used as the base of this authority change for whatever reason, then the authority of this operating licence must be amended with immediate effect to reflect the new address used as a base;
- Fare structure restricted to that of flag fall, Rand/km and waiting time only;
- Time based tariffs and any type of surcharging is strictly prohibited;
- Fare structure to be clearly legible and displayed on both back doors of the vehicle;
- Detailed trip data (electronic or other) to be kept and made available to the Planning Authority on request - especially in terms of 180 day proof of operation;
- Display operating licence, decal and rank (municipal or private) token – if applicable - at all times;
- Display approved and prescribed metered taxi roof sign;
- Leasing of vehicles and/or operating licences strictly prohibited;
- Drivers with an international drivers licence need to convert same to a RSA driver's licence before carrying any passengers;
- Operating licence authority subject to vehicle meeting all required specifications and standards set from time to time;
- Non - Transferable i.e. a trading commodity – Transfer will only be considered if part of an estate or complete business take over;
- No ranking allowed at any municipal or private ranks - including the Waterfront, Port and Airport - unless expressly authorised; and
- The operator may carry passengers to destinations outside the area and may return with the same passengers, but may not ply for hire outside the area.

Legal Opinion:

In August 2015, the e-hailing service provider obtained legal opinion and several of the above conditions imposed by the PRE were challenged and are likely to be appealed to the Transport Appeal Tribunal or even to a High Court review. The optimum solution to this is regarded as being the amendment of the NLTA to provide for a specific Operating Licence category or for by-laws to be passed by the relevant Planning Authority (Municipality).

It is understood that the City of Cape Town is considering the preparation of such a by-law.

Recommendation:

Public transport services in the Western Cape, in particular in the Cape Town functional region, are interlinked and there is a need for a consistent approach between Municipalities to the regulation of public transport services. It is recommended that the Stellenbosch Municipality maintain close liaison with the City of Cape Town to provide input into the regulation process through the Intermodal Planning Committee. Until a final by-law is tabled and adapted for use by the Stellenbosch Municipality it is recommended that similar conditions of approval to those set out above be imposed in respect of Operating Licence applications for e-hailing type services.

7.5 LAW ENFORCEMENT

Chapter 7 of the NLTA deals with law enforcement in respect of land transport and states that Municipalities, which are considered to be “Enforcement Authorities”, must take active steps to develop system to improve land transport in their jurisdiction. A Municipality may enter into an agreement with the MEC or another Municipality to undertake law enforcement functions in their area or to second staff. This approach requires the approval of the Stellenbosch Municipality Council.

The Enforcement Authority may appoint Inspectors to monitor compliance with the NLTA and to assist in the investigation and prevention of offences in terms of section 90 of the Act. The powers of an Inspector are set out in section 89 of the NLTA and include the stopping and impounding of vehicles and the inspection of relevant documentation. The Stellenbosch Municipality has a dedicated team of two Traffic Officers assigned to this function.

All information pertaining to Operating Licence and applications as well as routes should be contained in a database that is readily available to the Inspectors.

Operators without Operating Licences should be subject to law enforcement as a matter of course; however these operators should be encouraged to apply for Operating Licences on routes where a demand for addition trips has been identified. The affected operators should be empowered by explaining the benefits of operating a licensed service and the procedure and requirements required to apply for an Operating Licence. The Taxi Associations should be consulted and involved in the empowerment process.

7.6 STAKEHOLDER CONSULTATION

On-going consultation between the PRE and the Stellenbosch Municipality is necessary during the process of the consideration of Operating Licence applications. There is also communication with other Planning Authorities concerning long distance applications. These consultations usually take place by means of written communication.

As is the case with the City of Cape Town, the PRE should be requested to provide a monthly statement of which Operating Licences have been granted, amended, renewed or transferred to the Stellenbosch Municipality for information purposes. Information relating to the entire Cape Town functional region should be requested.

Consultation with the public transport operators in the Stellenbosch area is also necessary to discuss local matters and a Forum for this discussion should be established to meet on a regular basis. The Stellenbosch Municipality intends to establish a liaison committee on which the taxi associations and relevant municipal departments are represented. This committee is intended to discuss matters relating to public transport facilities and traffic and not Operating Licences.

Consultation during the process of the preparation of the CITP and the OLS is a requirement and a workshop with operators was held to verify routes and Operating Licence descriptions.

7.7 PROPOSALS FOR IMPLEMENTATION

The Stellenbosch Municipality has adopted a strategy to improve public transport services and reduce traffic congestion in the town centre by attracting car users to public transport. The CITP contains a framework strategy for planning and phased implementation of an Integrated Public Transport Network. The introduction of an IPTN will affect routes currently operated by scheduled bus services and un-scheduled minibus services. The proposed preliminary IPTN routes are indicated in Chapter 6 of the CITP. Consideration should be give to the phasing out of existing Operating Licences and the placing of a moratorium on the approval of new Operating Licences that impact on these routes. This will reduce the impact and cost of compensation of affected operators when the IPTN is implemented.

The management and planning of public transport is critical function to provide a convenient and cost effective public transport service to all. The Stellenbosch Municipality should consider the establishment of a dedicated structure for this purpose and appoint suitably qualified staff.

A strategy should be developed to rationalise all existing Operating Licences and manage the approval of new Operating Licences to reduce the over supply of services where this may exist. This will assist in reducing congestion at existing ranks and facilities as well as reducing traffic congestion.

Law enforcement is critical to the successful implementation of the OLS and a dedicated team of Inspectors and Law Enforcement Officers should be set up to deal with public transport law enforcement. This will assist to improve the quality of the service and safety on public transport services.

An electronic database should be established and updated regularly to provide easy access to Operating Licence information and route descriptions. This will greatly assist the law enforcement function.

A communication Forum should be established with existing operators to meet regularly on matters concerning the public transport industry including issues and concerns, public transport facilities and law enforcement.

8. TRANSPORT INFRASTRUCTURE STRATEGY

SYNOPSIS:

- ≈ The Transport Infrastructure Strategy deals with the maintenance and provision of all types of transport infrastructure including infrastructure for non-motorised modes, road based modes and rail infrastructure. The following types of infrastructure projects are included:
  - Infrastructure Maintenance: Maintenance and rehabilitation of roads, public transport facilities and traffic control equipment.
  - Road Infrastructure: The construction of all classes of roads, bridges and associated stormwater, non-motorised infrastructure such as sidewalks and cycle tracks and traffic control equipment.
  - Public Transport: Passenger facilities, dedicated rights of way and off-street facilities such as terminals and depots.
- ≈ A strategy is proposed to improve transport mobility on major roads linking Klapmuts and Somerset West and passing through Stellenbosch. Several alternatives have been identified for further investigation and consultation:
  - Construction of a by-pass road to the west of Stellenbosch. This is a long term solution that has advantages and disadvantages.
  - Travel Demand Management to reduce the reliance on cars and encourage the use of public transport
  - Increase the capacity of existing roads for all users

8.1 INTRODUCTION

The Transport Infrastructure Strategy of the Stellenbosch Municipality CITP deals with the maintenance and provision of all types of transport infrastructure including infrastructure for non-motorised modes, road based modes and rail infrastructure. The following types of infrastructure projects are included:

- Infrastructure Maintenance: Maintenance and rehabilitation of roads, public transport facilities and traffic control equipment.
- Road Infrastructure: The construction of all classes of roads, bridges and associated stormwater, non-motorised infrastructure such as sidewalks and cycle tracks and traffic control equipment.
- Public Transport: Passenger facilities, dedicated rights of way and off-street facilities such as terminals and depots.

According to the vision and objectives of the CITP (Chapter 2), the following are areas that require special focus to support the IDP goals of the Stellenbosch Municipality, being a

preferred investment destination, with a safe transport system that provides accessibility for all in a sustainable way.

Several areas have been identified by the Stellenbosch Municipality as the main focus areas for the improvement of transport infrastructure. These are the following:

- Accessible transport
- Parking
- Non-motorised transport
- Public transport
- Traffic congestion

While the above must receive priority attention in the CITP, the Stellenbosch Municipality still has an obligation to maintain and upgrade existing infrastructure to protect the investment that has already been made.

8.2 ROAD MAINTENANCE STRATEGY

The Stellenbosch Municipality last prepared a Pavement Management System (PMS) in 2010 to develop a plan for the maintenance of roads in the municipal area. The PMS provides information for strategic planning and budgeting for the maintenance and rehabilitation of the road network and for the planning of road implementation projects. It is intended that the PMS will be reviewed in 2015, however this will be too late for the inclusion of the updated information in the current CITP. The results of the updated PMS will therefore be included in the subsequent annual update of the CITP in 2016.

The PMS provides the Stellenbosch Municipality with guidance in the following matters:

- The present condition of road pavements in terms of structure and function
- Road sections that should be scheduled for rehabilitation in 12 to 15 years
- Road sections that should be resurfaced in the current year to prevent further deterioration
- The most effective maintenance measure in each case
- The funding required to carry out the maintenance programme to bring the road network up to an acceptable level of service and to alleviate the provision of unnecessarily expensive maintenance in the future

It is estimated that the replacement value of the bituminous road network is R651.6 million (PMS 2010). It is recommended by the World Bank that an amount of 2.5% of the replacement value, or R16.3 million, is required to maintain the road network annually. Furthermore, it is estimated in the PMS, 2010 that there is a backlog of funding for annual road maintenance of R 93 million. It is thus clear that an amount in excess of R16.3 million per annum is required to address the backlog and to restore the condition of the road network to an excellent level of service.

The PMS, 2010 recommends that an amount of R81.2 million be made available over a period of two years for short term maintenance and R78.4 million be made available over the next five financial years for road rehabilitation.

Chapter 12 of the CITP provides details of the projects and budgets that have been allocated to road maintenance in the following categories:

- Upgrade Gravel roads
- Reconstruction of roads
- Update Pavement Management System
- Reseal roads
- Upgrading of roads

An average amount of R18 million for the first three years has been budgeted for road maintenance.

8.3 ROAD INFRASTRUCTURE STRATEGY

8.3.1 Findings of the Stellenbosch 2010 Transport Model

Due to its unique location and surrounds, the town of Stellenbosch serves many functions, and has become an important transport hub, attracting large numbers of commuters, school trips, university traffic and tourists. It also serves as the support centre for a large farming community, and is situated at the crossroads of major Provincial roads, carrying increasing numbers of through traffic. Transport patterns are characterised by strong seasonal variations.

Although the Stellenbosch transport model was developed primarily for commuter travel, the results showed high levels of correlation with peak period, observed demand patterns. Preliminary outputs suggest that the model, with its underlying data sources, has become a valuable analytical tool for land use and transport investigations. The following are the most pertinent general observations thus far:

- Stellenbosch is a relatively affluent town, with more than 80% of its households living in (lower) middle to high income residential areas; The middle and high income groups are dominant in the employment market. Low income work opportunities in the town area are relatively scarce, due to the lack of heavy industries;
- Stellenbosch is quite an employment rich town for all income groups;
- Nearly 40% of the Stellenbosch workforce resides in neighbouring towns, from where they have to commute every day;
- About 25% of the students at Stellenbosch University commute from neighbouring towns;

- Non¬motorised transport (NMT) does not feature prominently amongst the high income group, except in the central town area where employment destinations are within a one kilometre walking distance;
- A high proportion (26%) of low income commuters are prepared to walk to work – some as far as 5 kilometres. The most prominent NMT commuter corridor is between Kayamandi and the town centre;
- High concentrations of pedestrian activity are also prevalent on and around the University Campus;
- Virtually none of the higher income residents and workers in Stellenbosch use public transport, partly due to entrenched behavioural patterns, high car ownership and because of non-existent or inappropriate public transport services;
- In the lower middle income group, up to 50% of motorised commuter trips are made by public transport – mainly taxi services within the town area. The vast majority of trips outside the Stellenbosch area are by private car;
- In the low income community, almost 80% of motorised trips are by public transport – rail is the main mode of travel to destinations outside the study area;
- Assignment results confirm that the main roads into Stellenbosch are under intense pressure and that the R44 and R304 in particular cannot support further developments without significant infrastructure improvements;
- The model also confirmed that a fairly large proportion of the peak period traffic on the Provincial main road system consists of through traffic and that further consultation with the WCG is required;
- The University of Stellenbosch and its student population generate a significant amount of traffic during the peak period.
- These preliminary findings highlight some daunting challenges for the planning authorities – issues that require an environmentally sustainable, integrated approach to land use and transport policy planning as well as a rethink of future housing and economic growth strategies.

8.3.2 Long Term Road Network Improvements

The Stellenbosch Local Municipality: Comprehensive Integrated Transport Plan, 2011 (CITP) made proposals for the improvement of the major road network in and around the town of Stellenbosch including a western “by-pass” road intended to relieve traffic congestion in the town and to provide an alternative route for through traffic.

The motivations for this proposal are:

- The Stellenbosch Roads Masterplan (2012) indicated that the section of the R44 between Paradyskloof and the van Reede Street intersection and Adam Tas Road between the junctions with the R44 and Merriman Street are operating above their capacity. The congestion in the peak period on these

critical sections of the road network means that the traffic comes to a virtual standstill (level of service E or F). Additional road capacity is required and critical intersections along the Adam Tas Corridor need to be upgraded due to saturated peak hour traffic.

- There is also a significant proportion of through trips (in excess of 10%) between Paarl and Somerset West that use the road.
- The corridor provides access to the commuter rail service at the Stellenbosch and DuToit Stations. The stations are accessed by public transport and a high volume of pedestrians that must cross the Adam Tas Corridor on the way to the town centre, giving rise to pedestrian / vehicle conflicts.
- Due to the traffic congestion on the Adam Tas Corridor, traffic seeks alternative routes through the historical part of the Stellenbosch town on roads that are not intended to carry high volumes of traffic.
- The congestion on the R44 leads to a number of unintended consequences such as:
  - Wasted time
  - Increased operating costs (fuel)
  - Raised pollution levels
- The net effect is that the reduced accessibility impedes any further development which is in conflict with the stated SDF goals. The Stellenbosch Municipality's intention is to promote "the right type of development at the right places". The right type of development is such that it can be supported by public transport, meaning densification along public transport corridors rather than urban sprawl. The right places are those that do not threaten the historical heritage part of the town. If nothing is done the pressure to redevelop the historical part of the town will intensify. Alternatively, random satellite developments may occur as developers explore cheaper alternatives, not necessarily supporting the stated SDF goals
- Developments in the Adam Tas corridor have the potential to create many new jobs within Stellenbosch without having a detrimental effect on the historical part of the Town. Initial order of magnitude estimates are of the order of 8 000 new jobs, mostly in the commercial sector.

This proposal was reviewed by the Stellenbosch Municipality in consultation with the Western Cape Government and the City of Cape Town in the context of the greater functional region and three alternative strategies were developed as broad conceptual route alignments for future consideration. No attempt has been made at this stage to define specific route alignments and no detailed investigations of the potential benefits, costs or impacts on land ownership or the environment have been carried out to date.

The Stellenbosch Municipality intends, in time, to further investigate these route alternatives in consultation with all relevant role-players in order to further refine the alternatives, consider and evaluate the impacts, costs and environmental implications before selecting alternatives for further, more detailed evaluation. At this stage the proposed broad route

alignments have been included in the CITP as a record of what alternatives are available for future, further evaluation. The alternatives are indicated on Figure 8-1, Figure 8-2 and Figure 8-3.

The features and possible future function of the three alternatives are as follows:

Alternative A: External Main Road Network Improvements:

The objective of this alternative is to provide an alternative, direct road link for traffic between Paarl and Klapmuts, to the north of Stellenbosch and Somerset West / Strand to the south. This will also improve linkages to the Klapmuts development area and stimulate economic development. Traffic that at present travels through the town of Stellenbosch will be provided with an alternative north / south mobility corridor, thus reducing traffic congestion on the R44 (Adam Tas corridor).

The proposed road network improvements indicated on Figure 8-1 are as follows:

- A proposed new Expressway route to the west of the town of Stellenbosch linking the R310 (Baden Powell Drive) at the intersection with the M12 (Polkadraai Drive) to the R304 to the north of Cloetesville. The route will provide alternative access to Onder Papegaaiberg and Kayamandi.
- A road link (Secondary Arterial) between the R304 and the R44 to the north of Cloetesville.
- A new road link (Primary Arterial) between the R310 (Adam Tas Road) and the R44 (Strand Road) providing a connection between Techno Park, Paradyskloof, Brandwacht, and Coetzenburg. The route will provide an alternative to the R44 for traffic travelling between these suburbs and the educational and sporting facilities in the Coetzenburg area.
- A Secondary Arterial on the alignment of Cluver Road and Marais Road linking the Coetzenburg area to the Helshoogte Road.
- The upgrading of the Bottelary Road to Expressway status between the R304 and the R300, where a new interchange is planned.
- The upgrading of the Kromme Rhee Road between the R304 and the R44 to the north of Koelenhof to Primary Arterial status.
- The provision of a new Expressway linkage between the N1 and N2 between the R300 and the Stellenbosch Municipal boundary.
- A Primary Arterial on the alignment of the Robertsvlei Road to the south of Franschhoek (not shown on Figure 8-1) intended to provide an alternative route for freight.

Alternative B: Internal Road Network Improvements:

The objective of this alternative is to provide lower order alternative routes to the east and west of the town of Stellenbosch to relieve traffic congestion through the town and to provide more direct linkages between the suburbs to the south of Stellenbosch.

The proposed road network improvements indicated on Figure 8-2 are as follows:

- A proposed Secondary Arterial between Devon Valley and Kayamandi to the west of Onder Papegaaiberg linking the R301 to the R304.
- A new road link (Primary Arterial) between the R310 (Adam Tas Road) and the R44 (Strand Road) providing a connection between Techno Park, Paradyskloof, Brandwacht, and Coetzenburg. The route will provide an alternative to the R44 for traffic travelling between these suburbs and the educational and sporting facilities in the Coetzenburg area.
- Local Distributor road links between Jamestown and Blaauklippen Road and between Dalsig and the Coetzenburg area.

Alternative C: Road Network Capacity Improvements:

The objective of this alternative is to upgrade the roads in the R44 (Adam Tas) Corridor in order to improve mobility for all modes, relieve traffic congestion and to provide accessibility to proposed “Transit Orientated” developments in the Adam Tas Corridor in Stellenbosch (refer to section 9).

The proposed road network improvements indicated on Figure 8-3 are as follows:

- The upgrading of the R44 between Jamestown and Cloeteville to Primary Arterial status.
- The upgrading of the R44 to Freeway status between Annandale Road and Jamestown.
- The upgrading of the R304 between Cloetesville and intersection with the Bottelary Road.

Figure 8-1: Future Route Alignments: Alternative A

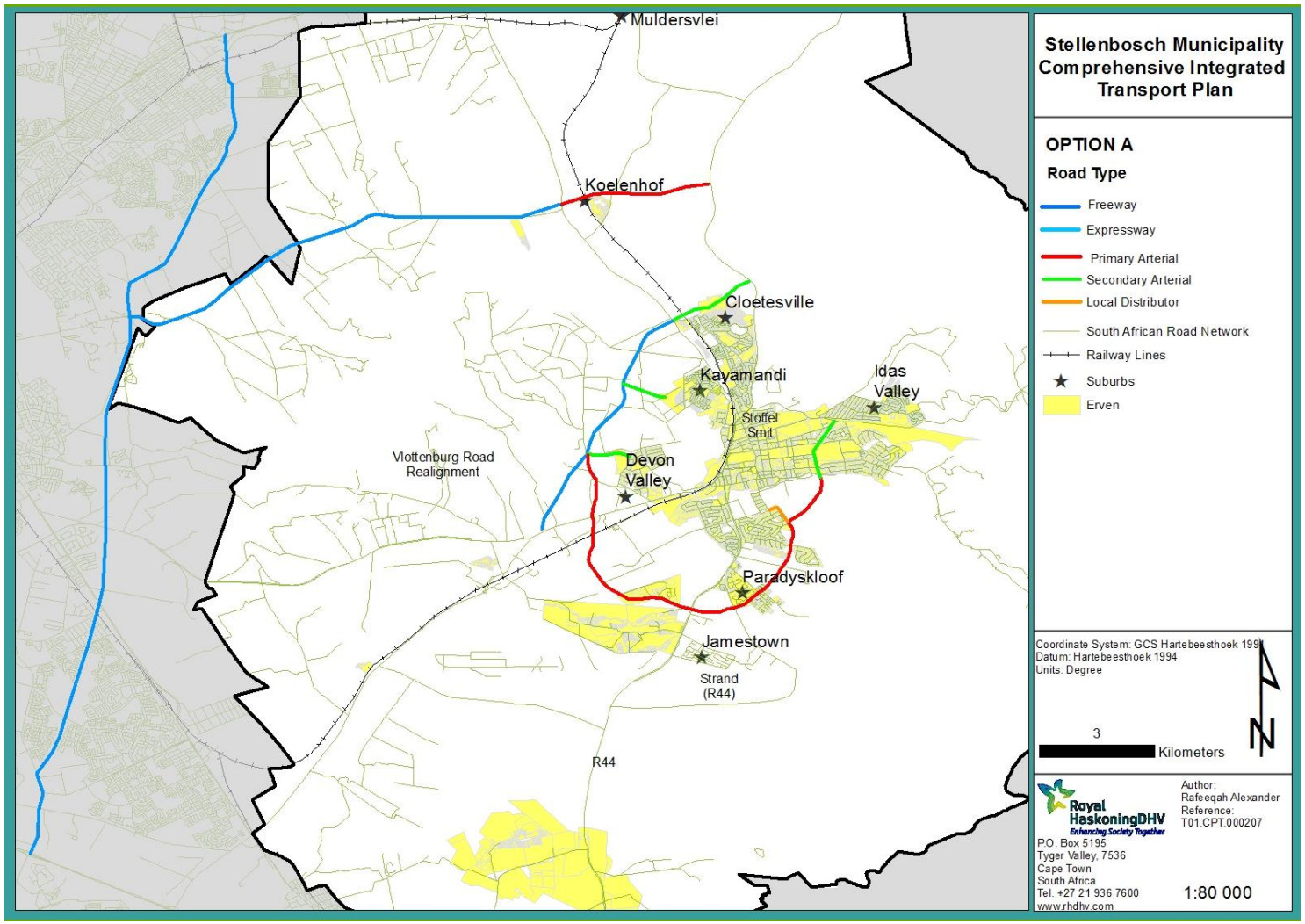


Figure 8-2: Future Route Alignments: Alternative B

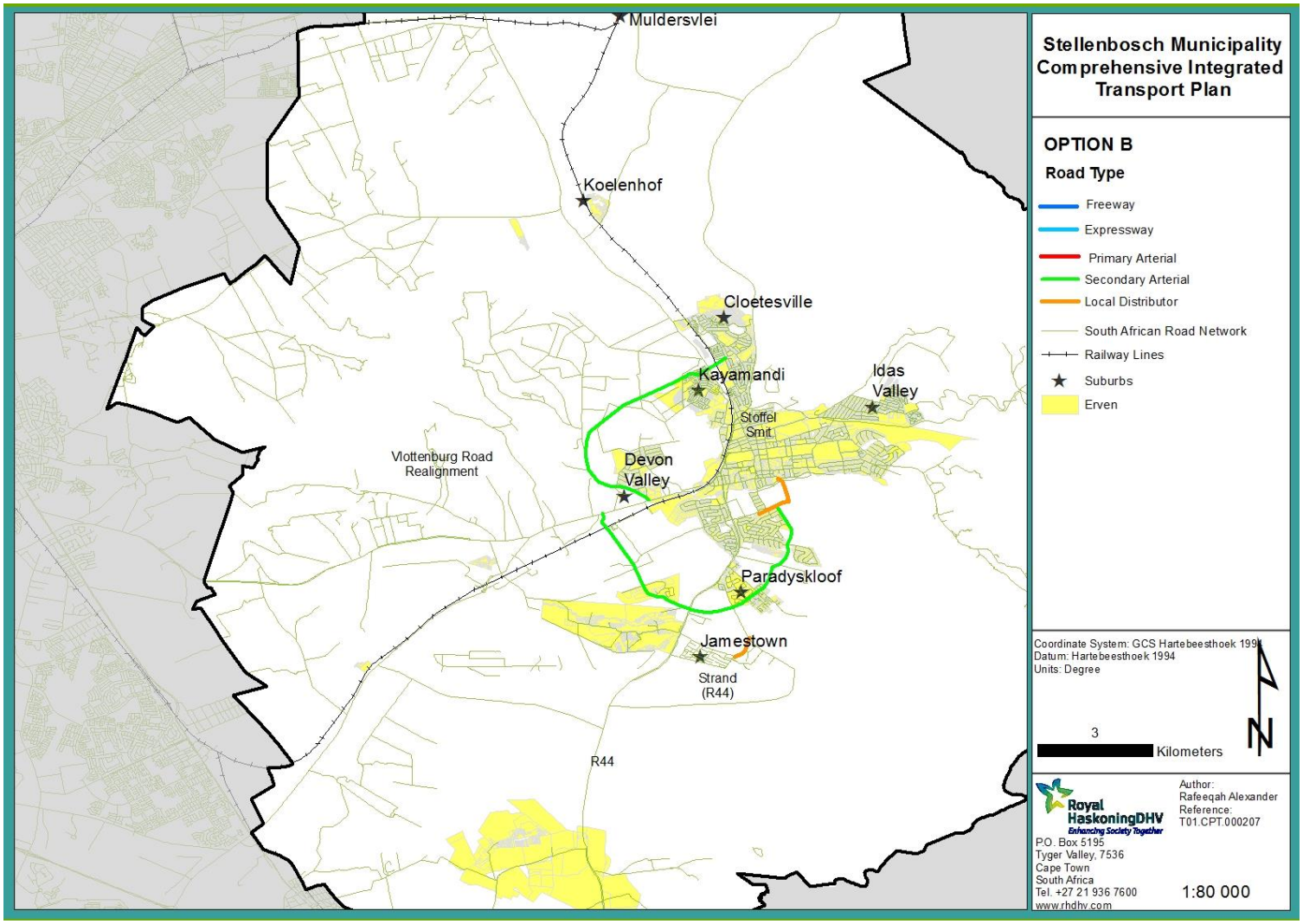
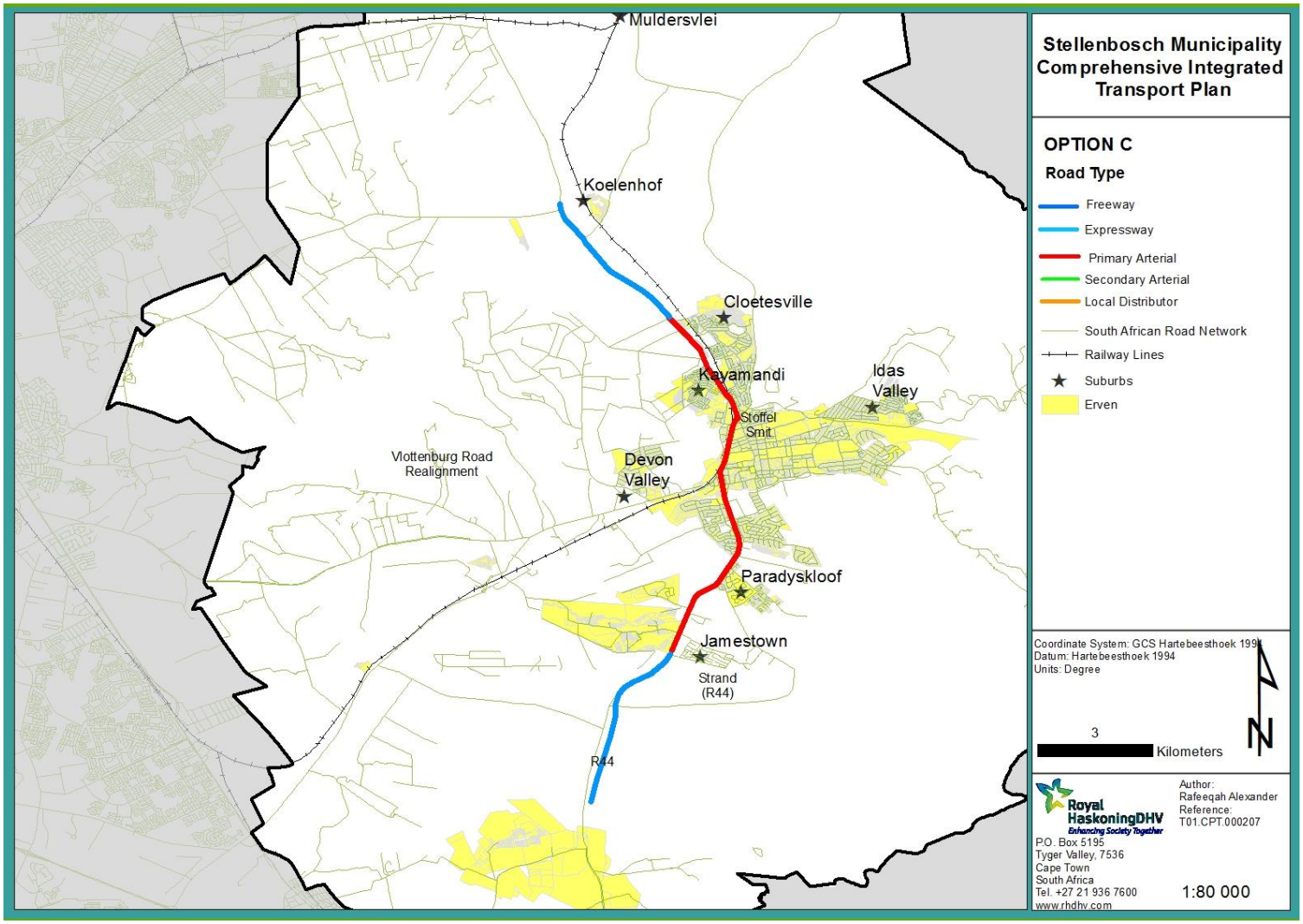


Figure 8-3: Future Route Alignments: Alternative C



8.3.3 Evaluation of Alternatives

It is proposed to utilise the City of Cape Town EMME/4 transport model to evaluate future road network options in the Stellenbosch Municipal area. The City of Cape Town has developed the EMME/4 model for the functional region which extends to the Stellenbosch Municipality. Agreement has been reached with the City of Cape Town to make use of the model.

The Stellenbosch Municipality has included the preparation of a meso traffic model for the town of Stellenbosch: CBD area in the scope of work for the Comprehensive Integrated Transport Plan that is currently being prepared. It is proposed that this work be extended to the evaluation of network options on an ongoing basis as a part of the more detailed investigations and feasibility studies of the road alignment options described in this section.

8.4 NON-MOTORISED TRANSPORT INFRASTRUCTURE

The Stellenbosch Municipality prepared a Non-motorised Transport Network Plan for the town of Stellenbosch comprising of sidewalks and cycle paths taking into account the needs of users and safety aspects. A list of NMT projects has been identified in the town of Stellenbosch as well as in settlements and towns in the Municipal area. The projects were prioritised according to the following criteria:

- Safety
- Network Completion
- Network Enhancement
- Improving community life
- Ease of implementation
- Cost of implementation

A list of the NMT projects that have been identified for implementation in the next three years can be found in Chapter 12.

8.5 TRAFFIC ENGINEERING PROJECTS

The objective of traffic engineering projects is to improve traffic flow in order to make optimum use of existing infrastructure and to ensure road safety. The Stellenbosch Municipality has an ongoing programme to improve traffic flow and road safety and infrastructure such as traffic calming facilities, traffic signal control at key intersections and intersection improvements. Certain roads in the town of Stellenbosch are congested in peak times and projects have been identified to assist with the situation.

The preparation of the following strategies and Masterplans are proposed by the Stellenbosch Municipality as part of the overall improvement strategy:

- Traffic Calming Masterplan
- Road Transport Safety Masterplan

- Traffic Management Improvement Programme
- Road Safety Audits

The following categories of projects have been included in the CITP budget for implementation over the next five years:

- Traffic Calming
- Directional Signage
- Traffic Signal Control
- Intersection Improvements
- Road Traffic Signs
- Pedestrian Crossings
- Road Safety Improvements

8.6 PARKING

Parking in the central town of Stellenbosch is in short supply. To improve parking availability, a kerbside parking system was introduced in 2003 using hand held meters. In addition there are several off street pay parking areas with boom access control. The Stellenbosch Municipality intends undertaking a CBD Parking Study in 2018 to identify a strategy for the management of parking. In addition, it is proposed to introduce an improved public transport service in Stellenbosch (refer to Chapter 6) as well as an improved non-motorised transport network in combination with “the Large Employer Trip Reduction Programme” one of the objectives of which is to reduce car usage.

Loading / off- loading of goods on-street exacerbates the problem and the Stellenbosch Municipality intends preparing a Parking and Loading Standards / Guideline Manual in order to control loading operations.

The Stellenbosch Municipality, Comprehensive Integrated Transport Plan, 2011 (CITP) made several proposals for the provision of additional parking in Stellenbosch, some of which have subsequently not been implemented. The proposals are:

- The provision of a “Park and Ride” parking area for 1 200 vehicles on a site adjacent to the R310 (Helshoogte Road)
- The construction of a parking garage at the Coetzenburg sporting facility for 1 000 vehicles
- The construction of a multi-level parking garage at the University of Stellenbosch facility in Hamandshan Street for 1 800 vehicles

The provision of the above facilities is expensive and will consume valuable space. The strategy should be finalised in the forthcoming CBD Parking Study in parallel to the improvement of accessibility to be provided by public transport and NMT.

Similar problems occur in Franschhoek. There is a shortage of parking in the CBD (along Huguenot Street) and the creation of 'Park & Ride' parking areas at the entrances to the village should be considered.

As in Stellenbosch parking problems are exacerbated by loading / off- loading of goods on streets or in parking areas that double as loading zones. A loading strategy should be investigated so that loading / off loading takes place out of peak times.

8.7 PUBLIC TRANSPORT INFRASTRUCTURE

8.7.1 Commuter Rail Network

The commuter railway line and associated facilities in Stellenbosch falls under the jurisdiction of PRASA who have indicated that there are currently no plans to upgrade the existing facilities. There are seven railway stations which fall within the Stellenbosch Municipal area, namely:

- Klapmuts
- Muldersvlei
- Koelenhof
- Du Toit
- Stellenbosch
- Vlottenburg
- Lynedoch

As part of the "Transit Orientated Development" strategy developed by the Stellenbosch Municipality for the Adam Tas Corridor, it was proposed to relocate the Stellenbosch and Du Toit stations to new locations to facilitate the development of adjacent land. It is therefore proposed to provide for a more detailed study of the implications of the relocation of these studies in the CITP budget that can form part of a motivation to PRASA for consideration. Public transport needs to be developed in synergy with property enhancements around network facilities to ensure that the run sustainably.

PRASA has formulated the following proposals in the Westen Cape Strategic Plan for expanding the Western Cape Suburban Rail Network:

The identification of possible extensions to the suburban rail network is focussed on building on the concept of a Cape Town Metro network that better serves the Metropolitan area. The aim is to deliver new network extensions timed to coincide with project start which would serve major housing and employment growth and the introduction of a limited number of new journey opportunities to support orbital journey patterns. A summary of possible extensions to the suburban rail network is provided below and is not limited to the context of the Stellenbosch CITP:

- **Blue Downs Line:** Blue Downs is a densely-populated area; this scheme incorporates it in the network while also linking Khayelitsha to Bellville. The

proposal is for a new electrified double-track alignment which would integrate with the wider network;

- **Unibell-Pentech-Philippi :** A potential alternative to the Blue Downs Line is to use existing PRASA alignments to effectively infill a missing link in the network. This is a lower priority compared with the Blue Downs Link;
- **Cape Town Airport:** Until the threshold of 6-8 million passengers per annum (mppa) for the airport has been exceeded an initial new link would be primarily aimed at employees at the airport and the surrounding area with frequencies increased in response to airport growth. A new interchange would be required at the airport. This initial Metrorail extension could be followed by a higher-speed connection once the passenger threshold has been exceeded;
- **Philippi-Southfield:** The proposal is for a new alignment between the two stations to serve new catchments but the alignment is still being refined. A demand study must be carried out which would examine the viability of the scheme;
- **Mitchells Plain-Muizenberg:** Serving similar catchments to the proposed Philippi to Southfield route, more detailed demand forecasting is required in order to understand whether either or both schemes may be supported by travel demand;
- **Chris Hani- Somerset West and Stellenbosch:** There are existing proposals to extend the current line to Chris Hani but current footfalls appear suitable for LRT if the new journey opportunities boost usage. There is the potential for an extension beyond Christ Hani using alternative technology that would serve existing catchments;
- **Macasser-Somerset West:** Significant predicted future growth means that our proposal is for a new dedicated alignment between these two settlements;

The prioritization and timescales of the proposed network extensions will vary depending on strategic purpose; this will range from high-priority, short-term schemes to lower –priority schemes planned for the longer term.

Proposals for enhancing the regional rail network in the Western Cape respond to the objective of connecting secondary towns to Cape Town and the importance attached to the South Cape and Saldanha and Vredenburg as regional motors as shown in the Western Cape Provincial Spatial Development Framework. The proposals are not limited to the following:

- **Cape Town to Mossel Bay and George:** Future growth in demand along this 400km corridor may support and justify the development of a new 200km/h rail alignment to Mossel Bay and George (one of the provinces " regional motors" of economic development) in the longer term and beyond to the Eastern Cape and KZN.
- **Cape Town Airport (Non-Stop Service):** An alternative to the Cape Town Airport connection described above would be the construction of a wholly new

higher-speed alignment directly to the airport being the first stage en route to Mossel Bay and George.

- **Rolling-Stock requirements**: The service proposals described deliver more frequent and evenly-spaced services on most corridors, so that can achieve a greater modal share. This will require an increase in the number of operational multiple-unit sets operating in the Western Cape area. The current fleet is life expired; PRASA has a national strategy for replacing all or part of the fleet. Currently the fleet size is 81 units, growing to 141 (excluding spares) given the proposals described in the previous section. The overall goal of an increased fleet represents a long-term requirement. In practice, peak-hour service build up will be prioritized by demand growth and will take place over time in line with the availability of new sets.
- **Intervention:** A restricted timetable with 2tph operating all day at 30- minute intervals could enable rail to compete more effectively with other modes. It would also allow for closer integration with the timetable proposals for the Strand corridor. In order to improve journey times into Cape Town the revised services should run fast between Cape Town and Bellville, calling only a Mutual. For the same reasons as on the Strand services, it is proposed to consider offering a premium service on all services (at least overt the peak) on one or more coaches , maintaining the offer of better seating, security and provision of refreshments and other benefits in order to develop the Business-Express concept.
- **Rolling stock:** Given that these are longer-distance services it is proposed that rolling stock with a transverse seating layout be introduced so as to make rail more attractive compared with other modes by providing most passengers with seats. This will also be consistent with the Strand corridor's services with which these trains would integrate.
- **Stations and connections:** Given the fast running of these services from Bellvile and the close integration with Strand services , it is important that key interchange stations are enhanced. The focus for improved station facilities should be on Bellville, Mutual and Eerste River. There may be a requirement for a new station close to Eerste River as to expand the catchment for rail.
- **Service enhancements:** Capacity on this corridor is constrained because it is single track from Eerste River to Muldersvlei. Double tracking is not needed to support the proposed service level therefore the proposal is for resignalling with two platforms at the retained passing loops that would improve the resilience of the timetable and accommodate any future timetable enhancements. This will also serve to improve the poor journey times. The services will also benefit from 4-tracking the section between Bellville and Maitland.

8.7.2 Public Transport Service Network

Details of the planning and implementation of a Public Transport Service Network (PTSN) in Stellenbosch are included in Chapter 6. It is proposed that the PTSN will ultimately comprise

a scheduled public transport service operating from a central terminal in the Stellenbosch CBD or from a new terminal in the redeveloped Adam Tas Corridor. Furthermore the service will operate on a rationalized route network with stops located a maximum of 800m apart to facilitate a maximum walking distance of 400m to the nearest stop.

The following infrastructure and facilities are required as part of the proposed PTSN:

- A central public transport terminal (interchange) with appropriate facilities (shelters, rank office, ablutions, lighting etc.).
- PTSN stops on routes with facilities (shelters, lighting, embayments, approach NMT facilities).
- A depot for the storage and maintenance of vehicles with associated maintenance and staff facilities.
- PTSN Management facilities (offices) and Control Centre.
- Offices and facilities for the PTSN operator.

Provision for the above facilities has been made in the CITP budget commencing in 2018.

The feasibuility of the provision of a pub lic transport lane and facilities on the R44 between Stellenbosch and Somerset West should be investigated as part of the stratregy to reduce traffic congestion.

8.8 Universal Access

All transport facilities must be universally accessible to all users. All new facilities must comply with this standard and existing facilities should be retro-fitted as soon as possible. This includes facilities at:

- Rail Stations
- Public Transport Facilities
- Sidewalks and Road Crossings
- Non-motorised transport facilities

It is proposed that provision be made in the CITP budget for the provision of new and the upgrading of existing transport facilities, where ferasible, to universally accessible standards on a phased basis.

The Department of Transport has set out its requirements for universal access in the document: Guidelines and Requirements: Public Transport Network Grant, 2015/16. Although the requirements are framed in the context of public transport, they apply equally to all aspects the built environment in terms of the National Building Regulations and SANS standards. The requirements are reproduced below:

The RSA Constitution sets down human rights, including the right to quality, dignity and a safe environment which means that all persons are able to use public transport and all transport facilities on an equal basis.

The basic human rights are set out in the Promotion of Equality and Prevention of Unfair Discrimination Act number 4 of 2000. Chapter 2 instructs that neither the State nor any person may unfairly discriminate against any person.

The National Land Transport Act (transport systems), the Public Transport Strategy and the Building Regulations (stations) indicate that new transport systems must be universally accessible from the outset and existing public transport systems must be upgraded within a reasonable timeframe.

The RSA signed the UN Convention on the Rights of People with Disabilities in 2007. This describes a process for the development and implementation of standards and guidelines. This is reflected in the Public Transport Strategy.

According to the above, the following minimum universal access requirements, set out in Table 8-1, must be met.

Table 8-1: Department of Transport Requirements for Universally Accessible Transport

Production of the Universal Design Access Plans (UDAP)	Basic Minimum Requirement	Reason
Production of the UDAP	Needs to be produced in accordance with the UDAP template produced by the DOT	To provide a comparable plan through which to describe, monitor and evaluate the implementation of universal access.
	Development of the UDAP by the access consultant	To ensure that there is consistency between the standards in the plan that minimum standards can be implemented and that relevant legislation is complied with.
Transport Planning	Ensure that the network is as compact as possible to enable general life activities to be situated as close as possible to public transport	To aim for a network that follows the principles of the building regulations part S
	Development of the entire network so that facilities are easy to reach and are within 50m of each other	
	Design of crossings to take passengers to or from a public transport stop or station are safe from vehicular traffic and allow passengers to board the vehicle as fast as possible.	To enable passenger safety and allow the public transport system to operate as efficiently as possible.

Production of the Universal Design Access Plans (UDAP)	Basic Minimum Requirement	Reason
Operational context	Compliance of contracts and licences with the Promotion of Equality and Unfair Discrimination Act, where it applies.	To enable compliance with existing legislation.
Marketing and Communications	Compliance with SANS minimum standards.	To ensure compliance with relevant standards
Customer Care	Compliance with SANS standards and a system for on-going consultation to be integrated within the system with customer feedback, for all categories of passenger.	To ensure that service users are able to provide feedback on the service that they receive, and to ensure that this feedback is used to improve services.
	Consideration of the implications of the Promotion of Equality and Unfair Discrimination Act	
Fare System	Policies, procedures and practices developed to mitigate problems experienced by passengers with special categories of need, within usual procedures and as addendums, where this is required.	To ensure that problems identified with using the Electronic Fare System are contained.
Passenger Information	All stations and stops must include a universally legible system of attaining information about the services (whether IT, internet or telephone or paper based) signage, including emergency signage, system maps and route maps.	To ensure recognition and usage of passenger information across the entire spectrum of society and visitors to South Africa.
	Compliance with SANS standards and where lacking, ISO standards	
Infrastructure (Whether internal or external, control room or depot)	Compliance with part S of the Building Regulations and accompanying SANS standards in all aspects of the built environment, not solely in buildings. This means that all stations and kerbside stops should form a level service with a gradient of at least 1:50. These platforms should also be level with the bus floor at entry doors.	This is the minimum standard affecting functional requirements in buildings. Whilst other parts of the Building Regulations refer to some functional requirements, these are not inclusive of people with disabilities. However, these projects acknowledge that passengers with special categories of needs including people with disabilities use aspects of the built environment other than merely stations.
	Access through the fare gates / turnstiles for parents with prams, people in wheel chairs, and with	

Production of the Universal Design Access Plans (UDAP)	Basic Minimum Requirement	Reason
	luggage. Proper approval of plans required under part S by a competent person (environmental access). For the purposes of the PTN grant, this person is the access consultant.	
Vehicles	Level boarding between the vehicle and the platform of the station without a gap	To maintain equality in dwell time for all passengers at all stops and stations.
	No mechanical lifts on vehicles or security gates for fare avoidance	These prolong the dwell time required to board the vehicle for certain people and prevent others from using the vehicles.
		Mechanical lifts are prone to inconsistent operation and carry a heavy service overhead, which needs to be managed through the contract with the operator. This results in additional staff costs and lack of service provision to certain elements of the population.
	All new trunk vehicles shall have the capacity to accommodate two or more people in wheel chairs, or parents with prams. (The footprint required for either category of passenger shall be interchangeable).All new feeder vehicles shall accommodate one such footprint.	The National Department of Transport has performance standards available to illustrate the standards required in each vehicle.
	All vehicles must include the provision of designated seating for priority passengers (people with disabilities, or who are elderly, parents with prams, and pregnant women) which must be easy to board or alight from.	

It is a requirement of the Department of Transport that an “Access Consultant” be appointed by the Stellenbosch Municipality to ensure universal access requirements are achieved. The appointment must not be as a sub-contractor to another consultant unless this is the Project Manager appointed directly by the Municipality to manage the project. The access consultant shall consult with all special needs passenger groups identified in the municipality. The Access Consultant must have the appropriate qualifications, skills and experience to carry

out the work. The Department of Transport holds a list of such professionals and can make this available. It is by no means a closed list. Interested parties are free to approach the DOT for the pre-requirements for inclusion in the list.

New public transport vehicles must be of the “low floor” or “low entry” type to ensure that the vehicles can board passengers at the kerb-side or at platforms provided at bus stations.

9. TRAVEL DEMAND MANAGEMENT STRATEGY

SYNOPSIS:

- ≈ The objectives of Travel Demand Management (TDM) are far reaching and may include reducing traffic congestion by reducing the demand for car use, lifestyles, using infrastructure efficiently, reducing the environmental impacts of private transport, and supporting investments in public transport and non-motorised transport (NMT).
- ≈ Several interventions, requiring further study, are proposed to achieve the above objectives:
  - Studies:
    - Investigate and prioritise congestion bottlenecks to make more efficient use of road infrastructure
    - Improve road safety
    - Promoting NMT
    - Promoting public transport
  - Programmes and Policy:
    - Enforce traffic laws that impact NMT activity, and by-laws governing use of public space
    - Review building design regulations and street design standards that impact on walkability
    - Develop campaigns to raise awareness of travel options, and to encourage a shift in behavior
    - Pursue possibility of establishing a car-share service
  - Infrastructure:
    - Plan in more detail improved public transport services and develop an implementation plan
    - Develop shared parking structures to reduce impact of traffic on the historic town core
    - Undertake localised improvements for pedestrians, such as pedestrian-only signals, bulb-outs and street lighting along key routes

9.1 TDM OBJECTIVES

There are many possible reasons for undertaking transport demand management, from encouraging active and healthy lifestyles, to using infrastructure efficiently, reducing the

environmental impacts of private transport and the low-density development that it supports, and supporting investments in public transport and Non-Motorised Transport (NMT). Some of these issues have been documented in the NMT section of this report (See Chapter 10.1).

Regardless of the reasons that are deemed to be most important, there is well-established literature on the kinds of TDM strategies available, and the key is to select those which are most applicable to a given circumstance. In the case of Stellenbosch, it is important to note that while there are many good reasons and strategies to improve mobility for low income residents (including the need for restitution of past under-investment in NMT, as noted in the municipality's NMT policy), this would not be a primary objective for adopting TDM strategies, simply because the target market for TDM is the car-driving public. People who walk or cycle or use public transport as their primary mode of transport do not need their travel "managed", because they are already supporting TDM objectives. However, improvement of conditions for captive markets, visitors and others is an important consideration in the selection and design of TDM strategies.

It is further noted that some TDM strategies are just as important for non-transport reasons. For example, improved urban design can create a more walkable town, which not only can reduce car travel, but also can create more active, safer streets, which can improve opportunities for public-facing businesses.

In compiling this report, reference has been made to the Stellenbosch Large Employer Programme (LEP), travel SMART, Draft Transport User Choice Model Report (Hatch Goba, 30 June 2015). Nothing in the recommendations made here is intended to contradict or override the findings or recommendations of the LEP report.

Some general objectives (or categories) of TDM strategies are outlined below, and their potential applicability to Stellenbosch, before going into more detail on specific recommendations.

Category 1: Improving travel options for residents and visitors

The town and the broader municipality provides for a number of different travel markets, including people who cannot afford to drive, even poorer people who cannot afford public transport to get to work, unemployed people who travel for other reasons, and middle to upper income people who can afford to drive but feel that is their only option because they are not willing to use public transport in its current form, and are not prepared to walk or cycle because of distance or concerns about safety and personal security. Cycling should be considered a transport mode that is eminently suitable for much of Stellenbosch, because of the relatively flat terrain, the strong student presence, overseas tourists who are used to cycling around cities, and the low cost of cycling for poorer residents. Many internal trips are also too short for public transport. However the town has over the years become less suitable for cycling as students and others drive more, making other forms of transport more difficult.

It can be seen therefore that options are limited for all travelers, which results in an imbalanced transport system that places a strain on road infrastructure, reduces economic efficiency, increases safety risks and reduces the financial viability of public transport.

Strategies therefore are needed to address safety of people walking or cycling, and to ensure that future growth and urban design of the town supports these modes. Walking, it should be noted, is also important for supporting public transport.

This is not entirely about significantly increasing capacity of alternative travel modes, but about ensuring that there is at least some increased choice. For example, if safety or security are obstacles to walking from an office to a shop during an employee's lunch break, then the need is to make walking conditions such that people will consider it to be a viable option. In this example, it would not be about widening sidewalks, but about factors such as safely crossing traffic, or eliminating road sections that lack activity and where pedestrians feel vulnerable to muggings or other threats. It might also mean improved shelter from rain on well-used routes.

For cycling, in many cases the need is also not for extensive high-capacity lanes, but for addressing very specific localised areas where traffic safety is a concern. A continuous network is important, but this can be a combination of different types of facilities depending on the conditions, and in some cases it can be a simple sharrow (designated shared lane where there is insufficient space for separate car and bike lanes) – the key is to increase awareness of what routes are encouraged as cycling "arterials" that feel comfortable for the rider from a safety and security perspective, while connecting important destinations for different bicycle users.

Category 2: Reducing need for investment in large-scale public infrastructure

While the previous category (increasing travel options) is not so much about facility capacity, this category is about creating significant shifts in travel behavior to reduce the need to spend public funds on new road capacity. This implies that strategies supporting this category need to produce a large-scale impact on traffic volumes during peak periods. For example, if increasing cycling were the chosen goal to reduce the traffic delays on the R44, there would need to be a virtual bicycle highway with an associated network connecting thousands of cyclists with a large number of destinations. Given the severe constraints on building such a high-capacity bicycle network, this is unlikely to be possible. Similarly, HOV or ride sharing strategies are unlikely to make a significant difference to traffic demand on congested streets. (It is noted that the report on the Large Employer Programme does indicate that 60% of surveyed office workers already travel to work as a passenger or as part of a lift club, which is significant, but this also suggests that there might not be much scope to increase the percentage further.)

Therefore, strategies to reduce the need for road capacity for vehicles would focus most strongly on public transport, walking, shifting time of travel, and eliminating all or some vehicles from certain parts of the road network. Parking strategies fall under this category, as well as related strategies such as shuttles to ferry people from remote parking garages to the core of the town.

It should be noted however that while certain strategies might not appear to have a significant impact on this objective, there can be other reasons to adopt such strategies, and all will contribute something to creating a more functional town.

Category 3: Increasing revenue to finance infrastructure

While this might not strictly be considered a TDM strategy, some financing strategies are indeed part of the toolkit available to manage demand. Tolls, congestion pricing and parking pricing can influence the mode and time of travel, while also raising funds for infrastructure. Development charges, which can be used for road infrastructure, do not directly affect travel, but they can be used together with zoning policies to influence the location and type of development and thus indirectly influence travel through changes in the spatial structure of the town. Encouraging Transit Oriented Development (TOD) growth along a corridor or at a particular development node (using such instruments) can establish the conditions necessary for reaching the thresholds of demand needed for certain forms of public transport, thus encouraging a shift from driving to riding a higher quality public transport service.

9.2 POLICY

From the discussion above it should be clear that TDM has the capacity to support, and be supported by, a wide range of policies from different spheres of government. That is its primary strength: that it has far-reaching benefits.

TDM contributes directly to nearly all of Stellenbosch Municipality's seven key development principles as outlined in the 2013 SDF:

- Provide public transport for all – by ensuring that public transport not only meets travel needs, but is more affordable as a result of creating a stronger market
- Create walkable neighborhoods – by creating more active streets and improving urban design
- Grow the economy to create jobs – by promoting transport modes that support small-scale entrepreneurs with passing trade
- Make wise use of our land – by supporting denser development that minimises sprawl
- Conserve, restore and regenerate resources – by making more efficient use of infrastructure, more resources are available for other services
- Grow more food for ourselves – by supporting denser development that minimises sprawl
- Care for our heritage – by supporting denser development that minimises sprawl

TDM also supports the central theme of *Stellenbosch Quo Vadis 2015,* which sees Stellenbosch as a compact, sustainable, inclusive town. TDM supports compactness by encouraging short trips that can be made on foot and bicycle, supports sustainability from a number of perspectives (e.g. reduced carbon emissions, less consumption of land) and supports inclusivity by improving access to opportunities using more affordable forms of transport.

A number of specific transport concerns are also addressed by TDM. Population and traffic growth has increased over the years, resulting in excessive travel delays, safety challenges, poor access to opportunities, greater inequity and increased demand for parking space. This reduces the quality of the urban environment and undermines the attractiveness of the town and its surrounds. It also increases costs in terms of travel time, fuel costs, health care, environmental impact, economic inefficiency, cost to government for supplying and maintaining infrastructure, and in other ways. Continued growth will worsen these conditions unless there is a significant shift away from car dependence. This shift will not happen without a concerted effort to ensure that investment is geared towards TDM goals. This effort needs to be led by the municipality with a reorientation of processes, funding, partnerships, design standards, regulations, by-laws and enforcement that will guide others (developers, employers, employees, scholars, institutions, etc.) to align their own plans and activities with strategies that are to the benefit of the municipal area as a whole.

9.3 PROPOSED INTERVENTIONS

The interventions discussed here are summarised and prioritised at the end of the chapter, but this section provides the motivation and potential benefits of each intervention, based on the policy and thematic approaches outlined above.

9.3.1 Small-Scale Interventions

Large employers and public buildings: bicycle parking, showers for employees, flexible working hours. Widely distributed bicycle lock-up facilities could be implemented in conjunction with the private sector providing funding (possibly with advertising) and can be used to increase awareness of the mode by putting them in visible locations (which is also important for security). The Green Building Council's Green Star rating tool provides credit for improving access by bicycle, and developers should be encouraged to claim points on that criterion. On flexibility, there can be a number of obstacles, some of which cannot be overcome by certain organisations. But there can be cases where the objections to travelling outside of peak periods are related to things that the municipality has control over, such as ensuring that street lighting is adequate for pedestrian needs (not just for vehicular traffic) around sunrise and dusk. For those flexitime workers who might use public transport, the challenge is providing service outside the peaks, when revenue is lower but a good quality service is needed.

Campaigns to increase awareness of existing options such as bicycle hire. Certain travel options are not used simply because people are unaware of them, or believe them to be inconvenient or unsafe. In some cases the perceptions may not match reality, in which case the challenge is to find campaigns to encourage people to at least try something once (such as using the train to get to work or to university). Such campaigns will require collaboration with different parties, but have the potential to begin a shift to alternative modes. Such campaigns might include short-term reductions in pricing, or permanently differential pricing based on the type of user (e.g. lower fares for scholars, seniors or job-seekers). The benefits of getting more people to use automobile alternatives include improved personal security from increased numbers, particularly during off-peak periods.

Peer pressure campaigns. Although difficult to prove conclusively, there is anecdotal evidence to suggest that people will adopt behavior that they feel their peers will not disapprove of. For example, if a driver sees another driver using a road shoulder as a traffic lane to skip a queue, other drivers will tend to follow their example, eventually resulting in a permanent new lane (during peak periods) if traffic laws are not strictly enforced. Similar patterns have been observed with parking behavior, such as when drivers park on bicycle lanes. The implication is that a combination of enforcement and education is needed to discourage inappropriate behavior, and to support behavior that is consistent with TDM objectives.

Establishment of car-share options that allow car hire on an hourly basis. (This is not the same as lift clubs or carpooling.) Examples are Zipcar and Autoshare in other countries, and recently Locomute in South Africa. This type of service works on the basis that members can book and use cars from a fleet that is distributed at parking locations across the urban area, or at particular business nodes (e.g. Technopark) from where employees may need to make trips during the day. (Locomute also offers a corporate fleet option, where the employer would pay for the cars, allowing employees to use them.) The report on the Large Employer Programme indicates that “84% of the workers use their car for other trip purposes such as attending meetings and shopping.” The benefit of car-share is greatest where public transport is good enough for discretionary riders who currently avoid using public transport so that they have access to their car during the day. Car-share allows people to avoid driving to work on the grounds that they must leave the office during the day.

Pedestrian-only (Scramble) phases in traffic signals, bulb-outs at intersections, pedestrian crossings. Localised design changes to intersections (e.g. traffic calming) can help improve the convenience of walking and access to public transport. A challenge here is for the municipality to accept the philosophy that the balance between pedestrian delay and vehicular delay needs to be “recalibrated” so that walking becomes relatively more convenient than driving short distances. This works together with parking policy (see parking location).

Improved pedestrian routing. Identify opportunities for “opening up” the urban fabric with a denser network of pedestrian routes, either by negotiating with property owners to make space publicly accessible as a walking route, or by ensuring that future development does not close off opportunities for a better walking network.

Parking pricing. Parking demand should be managed with pricing that is aimed at influencing areas of high demand for more efficient distribution and a balance between supply and demand. Some 60% of office workers surveyed for the Large Employer Programme indicate that they have access to free parking, which is a strong incentive to drive.

Freight transport management. Delivery trucks can be few in number but have a significant impact not only on vehicular traffic but also on the safety and convenience of walking. Loading zones need to be provided and managed in a way that avoids practices such as double parking, parking on sidewalks and reversing into traffic. Enforcing delivery times may be appropriate.

Speed reductions. Reduced traffic speeds increase safety for pedestrians, particularly at pedestrian crossings and other locations of high pedestrian volumes or where pedestrians are less mobile or confident in traffic (e.g. in wheelchairs, or those who are young or elderly).

9.3.2 Large-Scale Interventions

Parking location. For most efficient use of infrastructure, there needs to be a balance between parking supply and road capacity – increasing road capacity without increasing parking (or vice versa) is a waste of resources. (This applies primarily to peak period commuter trips, rather than off-peak shopping trips.) When considered spatially, this means that it can be possible to redistribute the supply of parking instead of increasing road capacity for drivers to get to parking locations. Thus some parking can be provided in the core of the town, at employment destinations, while the remainder can be in shared parking structures “outside” the congestion bottlenecks. (The Large Employer Programme identified some potential sites that could be served by shuttles.) Drivers then walk or take a shuttle from the parking to their final destination. Ideally this will generate significant volumes of walking to increase street activity for security and for supporting businesses that rely on passing trade.

Public transport. Many discretionary travelers will not consider using the existing train services or taxi services in Stellenbosch, and therefore do not treat these as viable options. A dramatically improved public transport service will not only provide a new set of options for many people, it will also make other strategies viable (e.g. car-share).

Finer grain of network suitable for walking and cycling (more “permeable” urban fabric to allow more direct routes for pedestrians and cyclists). Pedestrians and cyclists need to be provided with an advantage over car drivers in terms of safe and convenient routing in order to make these modes more viable as alternative forms of transport.

Encouraging route changes through adjustments to infrastructure. This can include extensive bypasses or localised changes such as grade separated intersections (e.g. on the R44 to reduce right-turning conflicts) to induce more efficient use of the road network.

Spatial planning that enables trip chaining (multiple destinations on a single trip) and shorter trips (that can be made on foot or bicycle instead of by car). This is related to TOD planning, but focuses specifically on increasing the mix and density of land uses along a corridor or within an area. The effect of this is to reduce the total number of trips made on roads.

HOV priority for bus and taxi services on key congested routes. There are limited opportunities for this on many of Stellenbosch’s streets if general traffic is still provided a lane, because of lack of space for road widening. However consideration should be given to converting some streets for use by public transport and NMT only.

9.3.3 Policy and Urban Management

Update and enforce rules and by-laws that govern how businesses and building owners can occupy public space. There needs to be a balance between encouraging a “café culture” for active streets, and ensuring that pedestrians and cyclists are not obstructed. Key NMT corridors should be designated, with rules that apply specifically to these corridors. Such

designations should not only be where there are formal bicycle lanes, but also on routes without specific infrastructure but that are generally “comfortable” for NMT users. This strategy will need to be preceded by an audit of NMT conditions that records how people prefer to use certain streets, and what obstacles they face.

Update regulations governing building design. This should include controls over building uses at ground floor (e.g. avoiding ground floor parking and blank facades. A key objective is to ensure that there is activity on the street and that pedestrians do not feel vulnerable as a result of a lack of visual connection between building interiors and exteriors.

Enforce traffic regulations. Many of the inconveniences experienced by pedestrians and cyclists are a result of people driving or parking illegally. However this is not only an issue of enforcement, but also of design – often when compliance is persistently low, there are strong reasons why people behave inappropriately, and street design (including parking, loading, street furniture and other elements) should be reconsidered.

Allocate responsibility for a municipal official to manage the roll-out of a TDM programme and to consider TDM opportunities within regular planning and design processes. This should also include responsibility for liaison with key stakeholders and potential partners, and planning of campaigns to increase awareness among the general public and businesses. The Large Employer Programme recommended establishment of a Stellenbosch Employer Transport Forum to encourage TDM strategies, and this should be one of the first tasks of the designated municipal official.

9.4 FURTHER WORK REQUIRED

Each of the following tasks is identified as a “high priority” item in the summary table at the end of the chapter, as these items form the basis of subsequent activities and projects.

- Identify stakeholders and potential partners who can help the municipality promote campaigns and other strategies to reduce car dependence.
- Undertake a literature review of work done elsewhere to establish processes and indicators for street audits that assess obstacles to walking and cycling, including the design of the street and adjacent buildings that influence the levels of comfort felt by people using the street.
- Build on previous survey of cycling in Stellenbosch, expanding to cover other issues as informants to a street audit and to updating of NMT and public transport policy. This can be part of on-going monitoring exercises as proposed in the Large Employer Programme.
- Undertake a street audit to improve understanding of current behavior of street users in response to different street conditions (street design, street furniture, building use, building design etc.) in order to improve understanding of what influences the way people use certain streets. This is important to develop policy and design standards for public space that can improve the walkability and attractiveness of the town. Identify routes that could be improved to support this objective. Note that an audit can be undertaken in a

number of ways, and can include forms of crowdsourcing data about how people actually use streets.

- Review building design regulations that impact on walkability. Also review design standards for outdoor lighting that would reinforce identified key pedestrian and cyclist routes.
- Undertake a survey of parking supply and demand (and pricing) of all parking in Stellenbosch, to improve understanding of the distribution across the town, as input to planning of new parking locations that improve the efficiency of the use of road infrastructure. Investigate the institutional and regulatory requirements for establishing and operating shared public parking structures, with consideration of alternative financial and operational models.
- Investigate the most appropriate routes for addressing congestion bottlenecks, considering the best ways to support overall system efficiency and TDM objectives, not just conventional measures of traffic delays.

9.5 CONCLUSIONS

An important characteristic of many TDM strategies is that they are flexible, allowing adjustments in response to changes in behavior. To get the most benefit from this, it is important to monitor conditions before and after strategies are implemented. Audits should therefore be considered an important part of the overall strategy in order to ensure that interventions become increasingly effective. Some early attempts may be less effective than expected, but the cost of such experimentation can be mitigated by ensuring that every attempt is treated as a learning opportunity.

It should be noted that TDM strategies, like many other transport management strategies, does not eliminate congestion. This is partly because congestion results in suppressed demand (also known as latent demand) that only becomes apparent when congestion is reduced, and people who had switched to other modes or times of travel return to driving in the peak periods. It is also because part of the attractiveness of TDM strategies depends on them being more convenient than driving in congested conditions. When congestion diminishes, the relative benefits of alternatives are also diminished.

However at the same time, the conventional measure of congestion (level of service based on traffic delays and queues) does not provide the full picture, because it does not take account of conditions experienced by people travelling by other modes. A multi-modal level of service rating, though rarely used, can assess the trade-off for example when increasing road capacity and traffic volume increases the delays experienced by pedestrians.

For these reasons, the recommended monitoring of before and after conditions should adopt more appropriate measures that do not automatically prioritise measures that reduce traffic delays. It is noted that the Large Employer Programme recommended a number of regular surveys to improve understanding of evolving conditions, and these should be carried out, along with the other recommendations of the LEP.

9.6 SUMMARY OF RECOMMENDATIONS

The following table is drawn from the material presented above. Priority ranking is an indication of how soon the intervention should commence, with a number of the high priority items needing to be completed (or commenced) prior to undertaking lower priority items.

Pedestrian improvements and parking strategies are likely to have the greatest effectiveness in the short term for encouraging a shift in behavior among discretionary car users. For this group, strategies related to cycling and public transport would be beneficial, but require a significant step change in municipal commitment and funding in order to achieve a visible impact on congestion. Nevertheless, investigations should proceed into medium term options for increasing options for alternatives to driving.

Table 9-1: Summary of Recommendations

Key focus areas	Interventions	Priority
	STUDIES:	
Urban management, personal security	Undertake a comprehensive audit of streets with a view to understanding the interaction between street design and movement patterns, and map key routes for designation and attention; include literature review; develop policy and design standards to improve walkability; key routes to receive particular attention regarding design elements	High
Urban management, promoting alternative modes	Map and review parking supply and demand and pricing, and assess opportunities in short term to influence spatial distribution of demand through supply and pricing; liaise with businesses to explore options for reducing free employee parking	High
Urban management	Investigate and prioritise congestion bottlenecks based on their contribution to TDM objectives rather than conventional level of service analysis; assess how route changes can be induced for more efficient use of road infrastructure, through strategically located adjustments to road capacity and intersection controls	High
Safety	Identify areas suitable for designation as speed reduction zones to improve safety for vulnerable street users	Medium
Promoting NMT	In future spatial planning exercises, include assessment of how density, mix and location of land development can improve viability of alternative forms of transport	Low
Promoting public transport	In future transport planning exercises, always consider how road improvements can enhance conditions for public transport and other modes as alternatives to car travel	Low
	PROGRAMMES AND POLICY:	
Promoting public transport and NMT	Implement recommendations of the Large Employer Programme	High – low
Programme development and coordination	Designate a TDM official and commence engagement with stakeholders who can assist in developing and running campaigns	High

Key focus areas	Interventions	Priority
Urban management, Awareness	Enforce traffic laws that impact NMT activity, and by-laws governing use of public space	High
Promoting NMT	Identify opportunities for creating a finer grained pedestrian and cyclist network by opening up semi-private space, and develop policies to ensure that future development does not eliminate existing or future routes	High
Promoting NMT	Review building design regulations and street design standards that impact on walkability	High – Medium
Awareness	Develop campaigns to raise awareness of travel options, and to encourage a shift in behavior; include improved enforcement as part of this	Medium
Supplementary modes	Pursue possibility of establishing a carshare service in Stellenbosch (e.g. with Locomute)	Medium
Urban management	Update rules and by-laws governing the use of public space, particularly on key NMT routes	Low
Safety, promoting NMT	Review freight management practices and their impact on pedestrians and cyclists; identify strategies and policies to mitigate impact on key NMT routes	Low
	INFRASTRUCTURE:	
Promoting public transport	Begin planning in more detail the public transport services proposed in this CITP, and develop an implementation plan	High
Promoting NMT	Pursue options for long-term development of shared parking structures to reduce impact of traffic on the historic town core	Medium
Promoting NMT	Undertake localised improvements for pedestrians, such as pedestrian-only signals, bulb-outs and street lighting along key routes identified through the street audit	Medium

10. FREIGHT TRANSPORT STRATEGY

SYNOPSIS:

- The freight system forms an integral part of the transport network. Freight is moved by means of the road network which is managed by South African National Roads Agency Ltd as well as provincial and local government and the rail network, pipelines and ports which are managed and operated for the most part by Transnet
- The Western Cape Government is mandated with the control of overloading of freight vehicles. There are currently 9 weighbridges within the Province, 1 of which is within the Stellenbosch municipal boundary.
- Overloading is not adequately controlled and there is inadequate legal support for enforcement.
- In Stellenbosch, the inbound heavy vehicle traffic volume accounts for 1% of the morning peak period of the inbound traffic volumes and is not demanding of the road system capacity.
- In Franschhoek, approximately 29% of heavy vehicles are through traffic on the main road. Although an alternative heavy vehicle route may alleviate some pressure on the Franschhoek main road, the majority of heavy vehicle traffic is generated in the town and the surrounding farms and will continue to make use of the main road.
- Proposed Interventions:
    - Development of an infrastructure improvement programme
    - Improve law enforcement and overload control
    - Development of a strategic freight network
    - Promoting and endorsing a self regulatory entity such as the Road Transport Management System (RTMS)
    - Investigation of the feasibility of installing an additional weighbridge within Stellenbosch
    - Detailed freight surveys are required
    - Investigate the use of alternative / preventative measures to deter heavy haul vehicles from using the Franschhoek pass as an alternative to the current Huguenot Tunnel and potentially the N1 Winelands.

10.1 INTRODUCTION

The freight system in South Africa forms an integral part of the transport network and operations within and outside of South Africa. Freight is moved by means of the road network which is managed by South African National Roads Agency Ltd as well as provincial and local government and the rail network, pipelines and ports which are managed and

operated for the most part by Transnet and its various divisions (such as Transnet National Port Authority, Transnet Port Terminals, Transnet Freight Rail).In 2013 this network conveyed approximately 781.7 million tonnes10 of commodities across the surface logistics system in South Africa.

An increase in globalisation and therefore international trade has translated to an increase of freight traffic that far exceeded the predictions made in the 1990s. This rapid expansion of the global markets and increase in freight traffic places significant pressure on the transport systems supply, not only on the road network but also the ports.

The draft National Land Transport Strategic Framework 2015 (prepared in terms of the NLTA) gives guidance on transport planning and land transport delivery by national government, provinces and municipalities. This strategic framework, once finalised, will provide renewed guidance to planning for land transport, including freight.

This chapter of the CITP deals with freight strategy and briefly discusses guiding policy, the status quo of freight transport and proposed interventions in terms of addressing freight issues.

10.2 NATIONAL AND PROVINCIAL LEGAL FRAMEWORK

The following national and provincial policy instruments inform the movement of freight.

National White Paper on Transport, 1996: aims to provide safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at improving level of service and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable.

Draft National Land Transport Strategic Framework (13 August 2015): This draft report indicates that the freight movement has a significant impact on the national transport network and results in high transport costs which increase the costs within the logistics value chain. The primary objective therefore, is to reduce the cost of freight logistics and influence market forces to transform the industry practice and behaviors, while maintaining profitable operations. Additional to this, is addressing the disparity in competition between the main land modes, i.e. road, rail and pipeline and address this by distributing the freight amongst the modes in order to reduce road congestion, improve road safety and reduce logistics costs.

National Freight Logistics Strategy, 2005: is directed towards reducing inland freight costs through lower system costs that result from increased efficiency, reliability and lower transit times, thus offering the customer viable modal choices between road and rail.

The Provincial Strategic Goals indicated that in order to safeguard the Province's road network, the Provincial government will advocate interventions which promote a shift in freight haulage from road to rail modes.

[10] Logistics Barometer 2015, South Africa, University of Stellenbosch

[11]**The Provincial Government of the Western Cape Strategic Goal 1** indicates a number of catalytic infrastructure projects which includes, ports and utilisation of existing infrastructure such as small harbours strategy, road network strategy and rail network facilitation. These projects will translate into more jobs and economic growth and therefore an increase in the movement of freight.

10.3 STATUS QUO

10.3.1 National Freight Movement

In terms of market share relating to freight transport, it is more useful to indicate tonne-km travelled as opposed to tonnes shipped. As mentioned in the Introduction, in 2013 781.7 million tonnes[12] of freight was moved across the surface logistics system in South Africa, which required 362 billion tonne-kms. Approximately 61% of the tonne-km travelled was on the road network, while rail accounted for 36% and the remaining 3% of tonne-km was through pipelines, crude transfer, coastal shipping and conveyor belt. This high percentage of road based freight is cause for concern as the road based infrastructure used is publicly owned and therefore freight conveyors share the road infrastructure with other users. Similarly in the case of rail, the freight rail operation shares the railway infrastructure with passenger rail operation; however this infrastructure is funded almost exclusively by Transnet without the use of fiscal subsidies.

According to the Rail Development Plan, the Long-term Planning Framework (LTPF), the freight rail network within the Western Cape in 2014 had a utilisation of between 60% and 80% which is considered moderate utilisation with the Saldanha – Sishen rail line experiencing 80% – 95% utilisation (heavy utilisation).

The Gauteng to Cape Town rail system links Gauteng, Western Cape and Free State Province and is predominantly used for the transporting of containers, domestic coal to Saldanha and other general freight. Some container and automotive traffic to Port Elizabeth also make partial use of this route.

Policy intervention may be necessary to address the high road modal share, at a national and provincial level, for the transportation of freight.

10.3.2 Western Cape

The Western Cape Government is mandated with the control of overloading of freight vehicles. They report that there are currently only 9 weighbridges within the Province, 1 of which is within the Stellenbosch municipal boundary. They operate 16 hours per day and five days a week and two weekends per month, with the exception of Beaufort West which operates 24/7.

Overloading is therefore not adequately controlled and it is reported that there is inadequate legal support for enforcement (according to the PLTF, 2011). This situation leads to an

[11] Provincial Strategic Goals 1
[12] Logistics Barometer 2015, South Africa, University of Stellenbosch

abuse of loading limits and will only be discouraged if the probability of being caught is high along with high related penalties.

10.3.3 Cape Winelands District Municipality

The Cape Winelands District Freight Strategy (CWDFS) report was prepared in 2012 and provides a strategy based on observations and a high level assessment of the district by looking at industry level producers and attractors of freight.

This report indicates that the general freight network includes in its primary freight network the following routes which fall within the Stellenbosch Municipality:

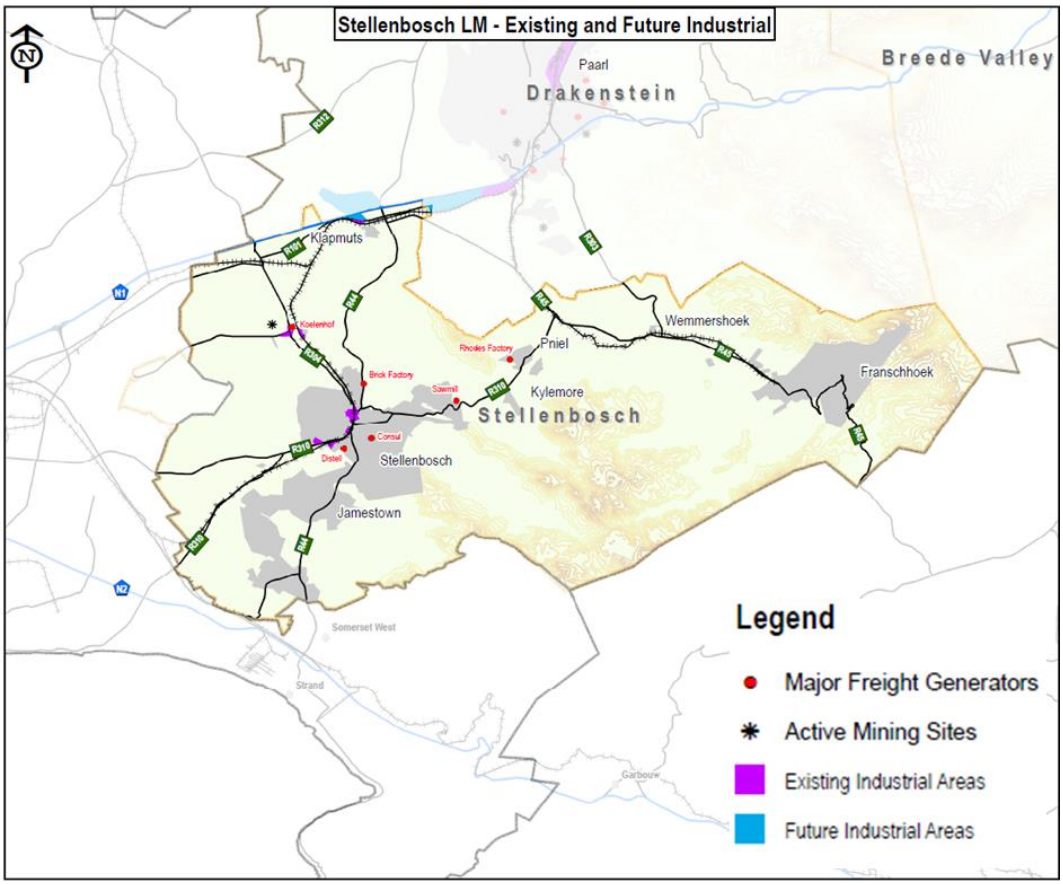
- R44/R46: Somerset West (N2) – Stellenbosch – Klapmuts – Wellington – Gouda – Ceres – Touwsriver (N1) and the
- R304: N1 – Stellenbosch

In terms of the Cape Winelands District, the Stellenbosch municipality is expected to show higher economic growth than the other municipalities. This can be attributed to the manufacturing sector that processes agricultural goods to high value goods such as wine, as well as manufacturing of inputs into agri-processing such as bottles.

In terms of the Stellenbosch SDF planning, the manufacturing industry is declining with limited expansion of the industry expected in future with the exception of agri-processing and high-tech industries. The future industrial development will be directed to the underutilised industrial area at Koelenhof and Klapmuts along the R101, with some potential for light industry in Jamestown.

Figure 10-1 illustrates the locality of existing and proposed future industrial areas within the Stellenbosch local municipality.

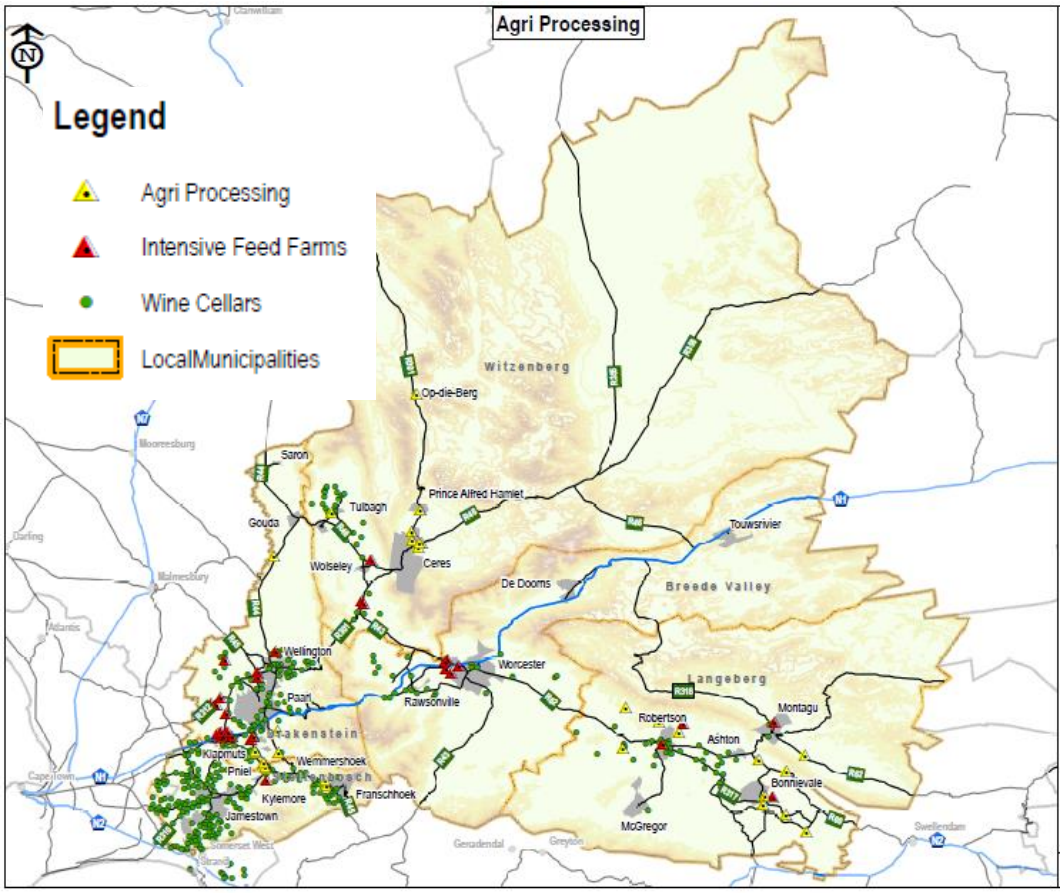
Figure 10-1: Stellenbosch Existing and Future Industrial Areas (CWDFS)



Agriculture in the municipality is dominated by the production of wine grapes, with the fruit production mainly contained in the Franschhoek valley and Groot Drakenstein area. The production of wine generates freight through the input required for cultivation, wine production and the transporting of the final produce.

Figure 10-2 illustrates the locality of agri-processing within the Cape Winelands; it is evident that there is a large concentration of this in the Stellenbosch Local Municipality.

Figure 10-2: Cape Winelands Agri-Processing Facilities



According to the 2007 Freight Transport Data bank report compiled by the Western Cape Government Department of Roads and Public Works the majority of road based freight in terms of vehicle volume, total weight and average vehicle weight within the Cape Winelands District is moved on the N1. This implies that on average freight vehicles within the Cape Winelands including Stellenbosch may move through the Stellenbosch town, or from the Stellenbosch town in order to join the N1 (and N2).

Although there isn't currently a heavy haul rail line within the Stellenbosch municipality, this doesn't exclude it from the changing freight demand experienced outside of the municipality.

SANRAL has proposed tolls on the N1 within the Cape Winelands district. The implication of the Winelands Toll on the N1, apart from the existing Huguenot tunnel toll, is that there would be a diversion of not only light vehicles, but heavy haul vehicles too. The diverted traffic would seek alternative routes to their destinations, most likely using lower order roads which haven't been designed for freight or which pose a safety concern

10.3.4 Stellenbosch Local Municipality

From the Transport Register chapter, it is evident that there are a number of heavy vehicles currently operating on the road network in the Stellenbosch Municipality. In the morning peak period, the inbound heavy vehicle traffic volume accounts for 1% (approximately 270 heavy

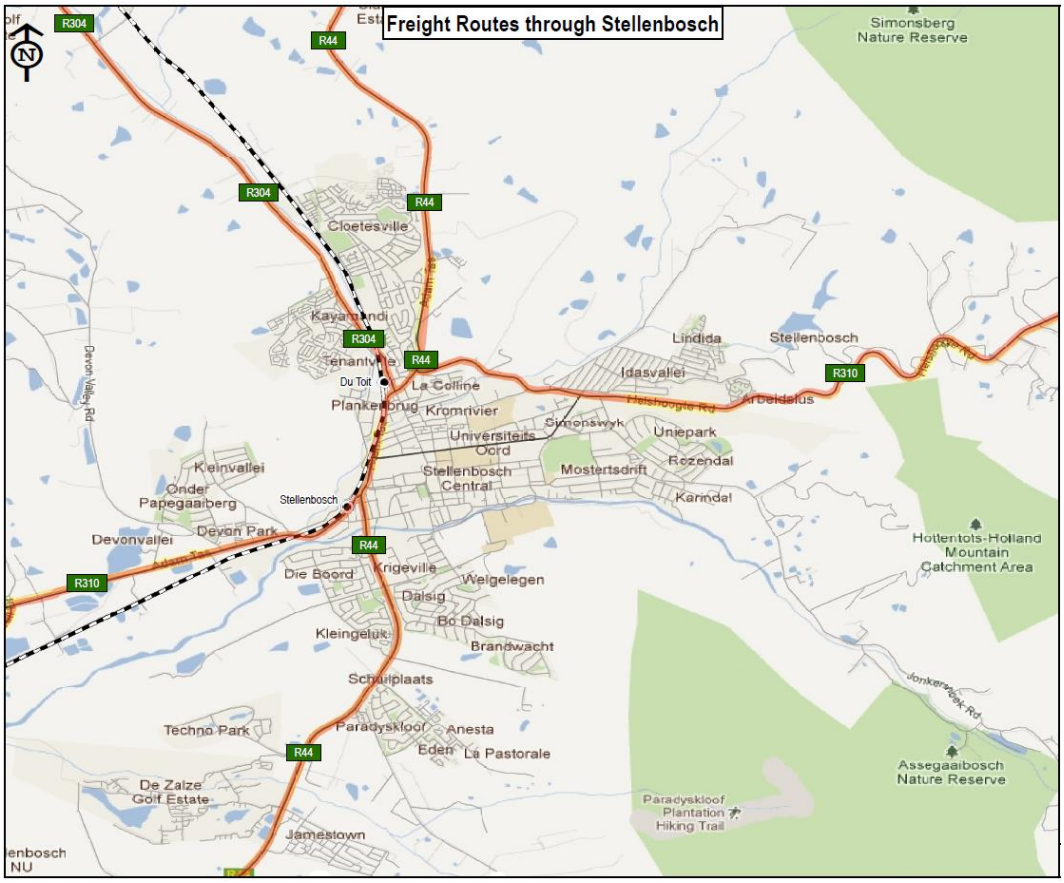
haul vehicles) of the inbound traffic volumes during the surveyed peak period (06:00 – 09:00). This figure (1%) is in line with general standards and the inbound freight movement is currently not demanding of the road system capacity. It should be noted however, that given the modal share of freight being predominantly transported on road, on a national level, in the absence of freight rail system within Stellenbosch, the freight generated and attracted within Stellenbosch needs to be transport via road as there is no alternative.

According to the Franschhoek Transport Plan (2011) approximately 29%[13] of heavy vehicles were considered to be through traffic on the main road (from the north-west R45 past Groendal and the south-east (Franschhoek Pass). The Franschhoek Transport Plan also indicates that although an alternative heavy vehicle route may alleviate some pressure on Franschhoek main road, the business in town and the surrounding farms constitute the majority of heavy vehicle traffic which will continue to make use of the main road.

Currently, what is being experienced is that a number of heavy haul vehicles are using the R45 through the town of Franschhoek. There is also only one weighbridge that falls within the Stellenbosch municipal area. This facility is being operated by both the Western Cape Government as well as the Stellenbosch Municipality Law enforcement. However, there are limited control measures within the Municipality as there are no impounding facilities for vehicles found to be overloaded. Figure 10-3 illustrates the freight routes i.e. R44, R304 and R310.through the Stellenbosch town.

[13] According to the report, the traffic count surveys were conducted on Saturday 14 May 2011

Figure 10-3: Freight Routes through Stellenbosch (CWDFS)



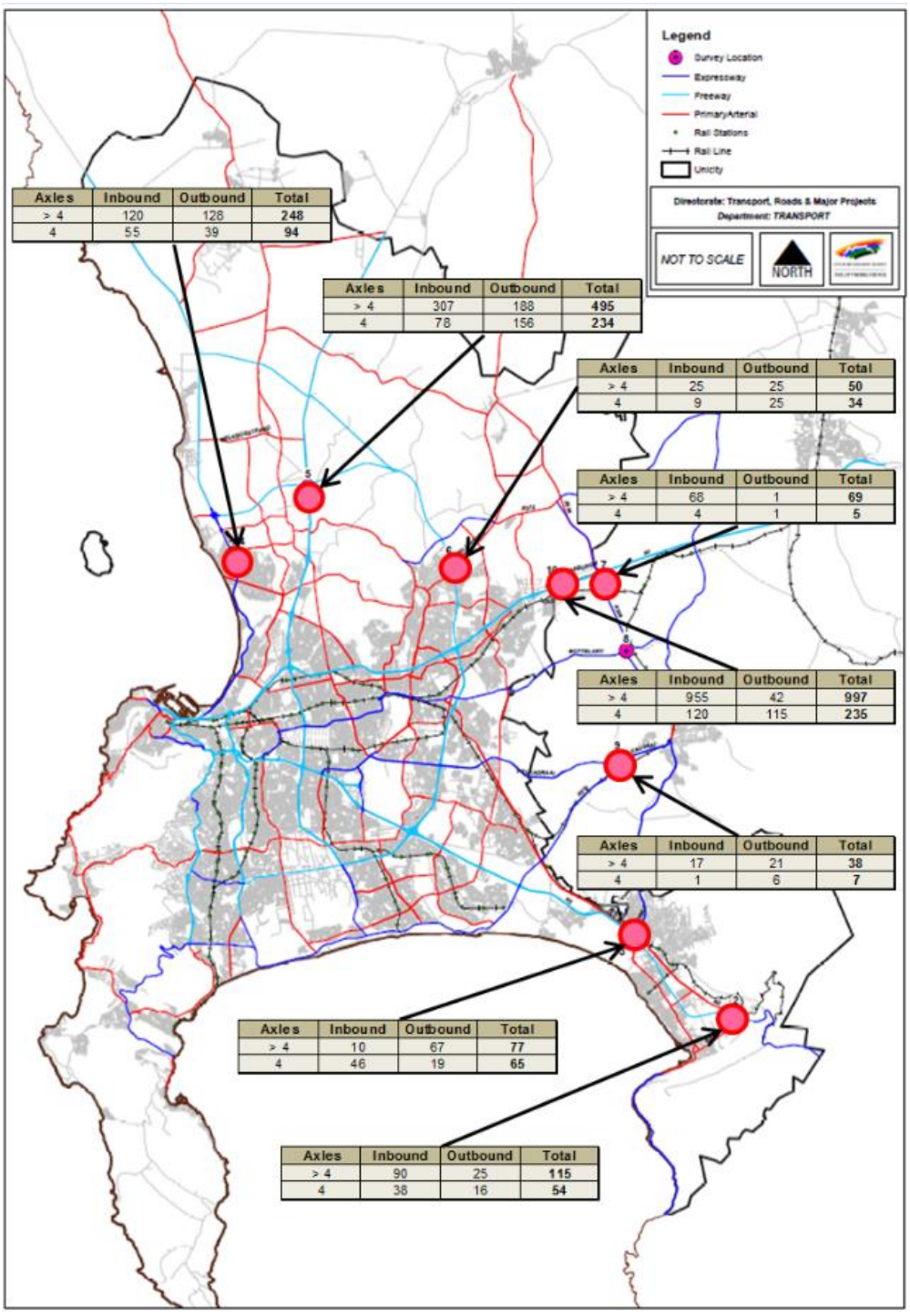
10.3.5 Cape Town Municipality

The City of Cape Town has also identified key issues related to road based transport of freight such as:

- Issues in relation to the size of freight vehicles,
- Congestion caused by freight traffic,
- The management of freight vehicles on the road network,
- Appropriateness of the road network geometry to deal with freight movements and congestion,
- Pavement damage due to freight operations, law enforcement with respect to overloading and illegal use of loading bays
- Weighbridge locations, procedures, jurisdiction and ease of avoidance of testing needs to be reviewed.
- The growth in the size of the Port of Cape Town in terms of freight generation needs to be adequately and appropriately addressed.

Figure 10-4 illustrates the number of trucks with 4 or more axles crossing the City of Cape Town metropolitan boundary on a typical day. It is evident that Stellenbosch Municipality is part of the freight network within the Western Cape, as there is a freight movement within and on the border of the Municipality.

Figure 10-4: Locations and volumes of vehicles with 4 axles or more entering and leaving the City of Cape Town (COCT CITP)



10.4 FREIGHT TERMINALS

10.4.1 Air Freight Transport

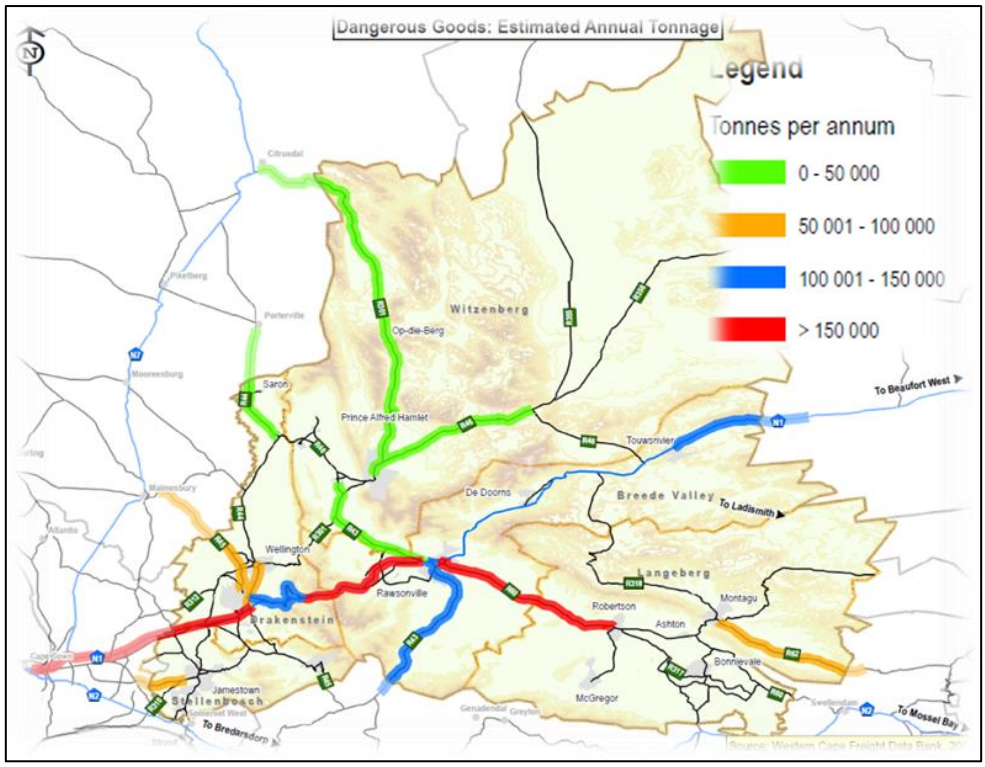
The movement of airfreight (air cargo) in the Western Cape is confined mainly to the operations at Cape Town International Airport. A considerable amount of freight is moved from Cape Town in passenger aircraft, with 80% of goods associated with passenger travel. It is estimated that approximately 30,000 tons per annum of air cargo is lifted from Cape Town, both internationally and to Johannesburg International Airport for transshipment and transfer to international flights. Some of the freight transported by air from the Western Cape comprises fish and crustaceans (mainly rock lobster), abalone, and ostrich products. Certain chemical, pharmaceutical and photographic products are received by air as well as computer software and hardware components.

10.4.2 Movement of dangerous substances

The transportation of dangerous goods and substances is considered a specialist form of freight transport and national regulations are in place to ensure the safety of road users. The prescribed precautions in terms of the regulations, requires that when transporting these goods, the classification of the type of hazardous cargo being transport be displayed and also that the driver has received specialist driver training. It is also required that authorities be notified of the proposed route to be followed to ensure that satisfactory levels of safety are achieved.

Figure 10-5 illustrates the estimated annual tonnage of vehicles.

Figure 10-5: Dangerous Goods: Estimated Annual Tonnage (CWDFS)



10.5 INTERVENTIONS

10.5.1 National

According to Transnet's Market Demand Strategy (2012) – Transnet will expand, and modernise the country's ports, rails and pipelines and infrastructure over a period of 7 years through its R300bn capital investment programme.

10.5.2 Provincial Land Transport Framework 2011:

The following rail interventions are identified as being required or planned within the five years preceding the PLTF:

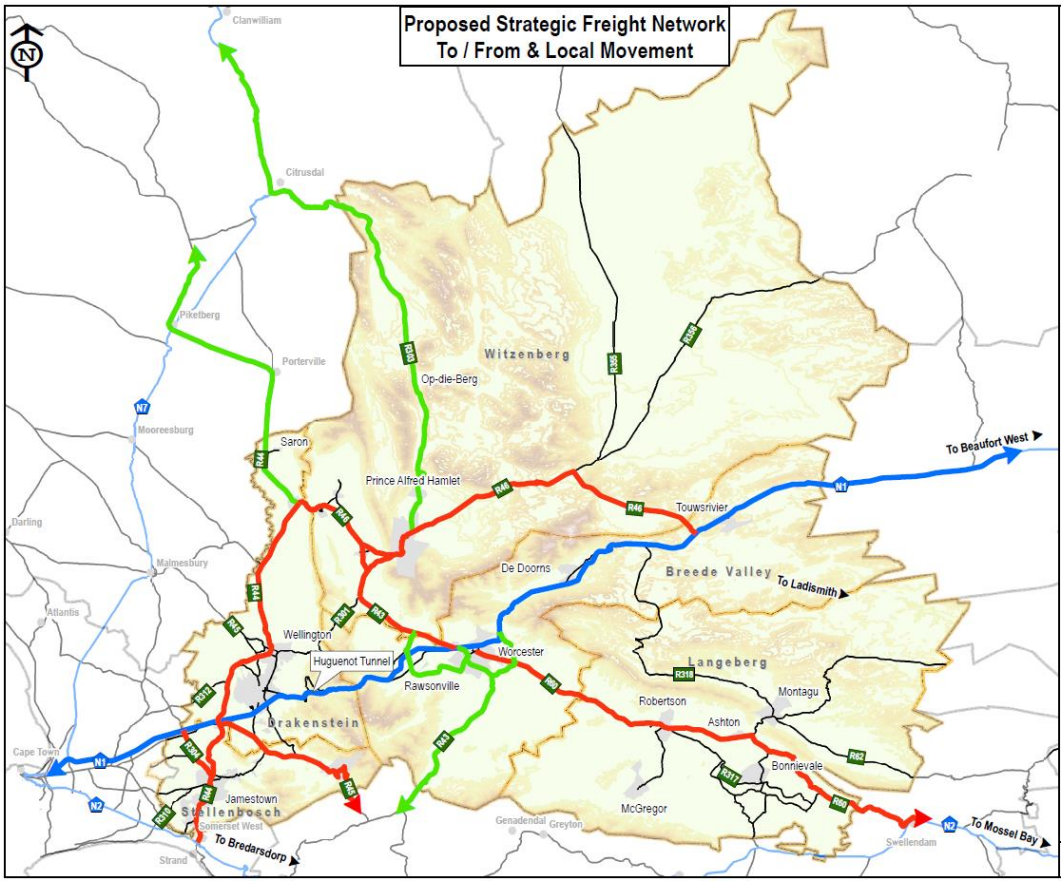
- Kraaifontein to Fisanterkraal / Klipheuwel (mainly commuter upgrades but impacts freight capacity)
- Cape Town to Du Noon / Atlantis new commuter line / freight line improvements
- Eerste River to Strand Line Doubling (to address network deficiencies)
- New crossing loops on the main line between Worcester and De Aar to accommodate longer trains and improve operating performance (including freight)

10.5.3 Cape Winelands District Freight Strategy 2012

Includes the following:

- Development of an Infrastructure improvement Programme
- Improved Law enforcement and overload control
- The proposed strategic freight network as illustrated in Figure 10-6

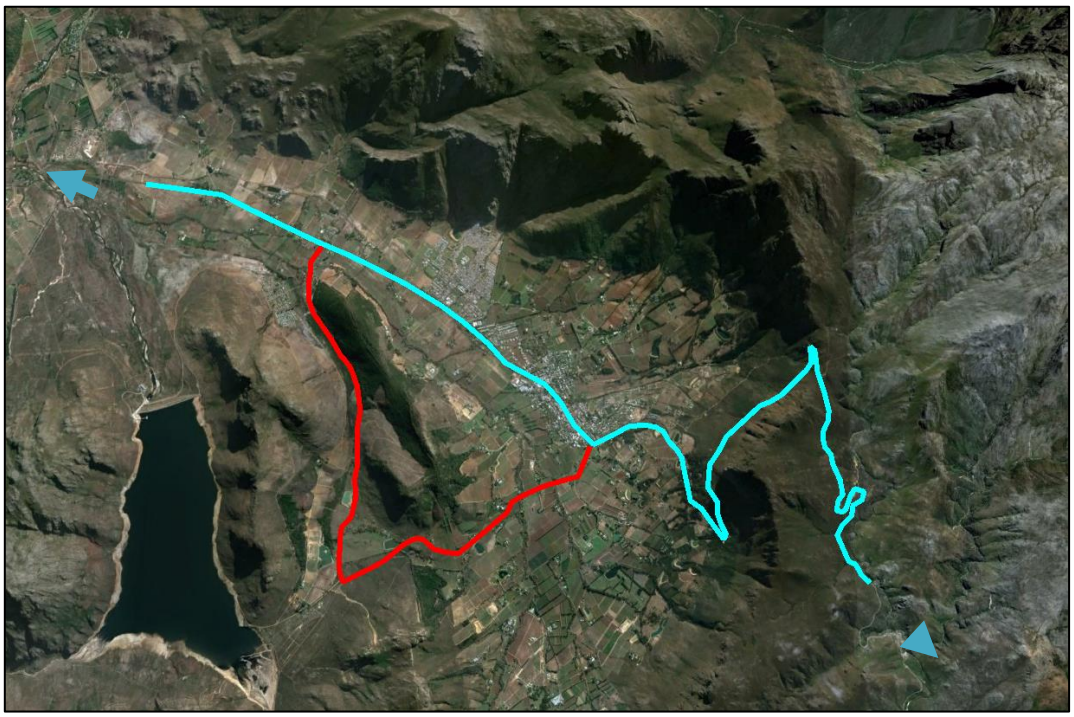
Figure 10-6: Proposed Strategic Freight Network To/From & Local Movement



10.5.4 Other interventions

- Promoting and endorsing of a self regulatory entity such as the Road Transport Management System (RTMS) initiative, which aims to assist in preserving the road infrastructure and improving road safety to demonstrate compliance with the Road Traffic Regulations.
- The preparation of a detailed freight network including; a designated routes for hazardous and abnormal load goods and the feasibility of installing an additional weighbridge within the Stellenbosch municipality.
- The Provincial Freight Strategy needs to be updated with current freight transport information, and therefore detailed surveys with freight operators and traffic surveys needs to take place.
- Investigate the use of alternative / preventative measures to deter heavy haul vehicles from using the Franschhoek pass, that is narrow and a major safety hazard, as an alternative to the current Huguenot Tunnel toll and potential the N1 Winelands Tolls. Figure 10-7 indicates the current and proposed route for long distance freight movement in Franschhoek (the blue illustrates the current route being operated and red indicates the proposed route)

Figure 10-7 - Current/ Proposed Freight movement in Franschhoek



10.6 CONCLUSIONS

Although freight doesn't pose an immediate concern for the Stellenbosch municipality, as the global market continues to grow and the increase in freight along with it, due consideration should be given to planning for an anticipated increase demand for freight movement within and through the municipality.

It should be noted that the Functional Region Sub-committee needs to work together with the City of Cape Town to prepare a functional region freight strategy.

11. OTHER TRANSPORT STRATEGIES

11.1 NON-MOTORISED TRANSPORT

SYNOPSIS:

- Non-Motorised Transport (NMT) can be described as; all means of transport that are human powered such as the modes of walking, cycling, animal-powered vehicles including variants such as small wheeled transport (skateboards, roller blades, push scooters and hand carts) and wheelchair travel.
- Non-motorised transport as a mode of travel and is the cheapest and healthiest mode of travel for the individual and the environment. The promotion of NMT is therefore critical to encourage economic development and dignified living in both rural and urban environments.
- The Stellenbosch Municipality prepared a NMT Policy in 2015 which defines the vision and objectives for NMT implementation in the area that strives to "facilitate a mobility environment where all transport modes are of equal importance."
- A market survey on cycling was conducted during the development of the Draft Stellenbosch Cycle Plan (2015). The results of this survey indicated that the main deterrents to cycling are traffic safety, the lack of cycling infrastructure and personal safety concerns.
- A NMT network plan for Stellenbosch was prepared in 2015 as well as a bicycle masterplan. These plans provide for the development of a network of sidewalks and cycle tracks, bicycle distribution, traffic calming, road traffic management and communication.
- In terms of the above plans, a number of NMT interventions and projects have been identified for inclusion in the CITP.

11.1.1 Introduction and Background

The Draft National Non-motorised Transport (NMT) Policy of 2008 describes NMT as; all means of transport that are human powered such as the modes of walking, cycling, animal-powered vehicles including variants such as small wheeled transport (skateboards, roller blades, push scooters and hand carts) and wheelchair travel.

Not only is non-motorised transport available to everyone as a mode of travel, it also provides the coupled benefits of being the cheapest and healthiest mode of travel for both the individual and the environment. The promotion of these modes in developing countries such as South Africa is therefore critical to encourage economic development and dignified living in both rural and urban environments. The first step in doing so is to recognise the importance of these modes in the entire trip chain as the start and end of a journey inevitably involves one or other form of NMT. 3 million South Africans walk to work while 5.4 million use public transport of which walking comprises a part of their trip. The National Household

Travel Survey of 2003 revealed that South Africans walk approximately 12 to 30 minutes to access a public transport service.

Transport Demand and Transit Oriented Strategies foster the development of compact communities which are practical on a human scale providing attractive sidewalks, paths and traffic calming measures and feel safe to exposed users particularly those with special categories of needs. These strategies will encourage the use of walking and cycling for shorter trips and public transportation for longer trips with private car travel being the last choice of mode.

It is therefore imperative that planning for NMT modes be integrated into the planning of human settlements and the motorised transportation system to affect a safe, reliable and functional transportation system that protects the needs of its most vulnerable users.

When designing and planning NMT networks and facilities, the users and their needs should always be considered. NMT networks should be planned based on the following guiding principles:

- Complete
- Direct
- Conflict less (between modes)
- Barrier-free (freeways, rivers, etc.)
- Motorised transport volume and speed appropriate (NMT facility class should be appropriate)

NMT facilities should therefore be designed to be:

- Safe – NMT users' safety must not be compromised through poor design
- Secure – Users should feel safe from criminals and danger when using the facility
- Comfort – NMT users are not assisted by a motor so they should be able to use the facility with ease therefore slope, width and surfacing should be considered
- Convenient – NMT facilities should be provided where the user needs to access it therefore attention must be paid to the desire lines of pedestrians and cyclists
- Direct – NMT routes should be as short as possible and should not always necessarily be aligned to the road network
- Attractive – NMT facilities should be aesthetically pleasing and offer a pleasant experience to its users.

Against the backdrop of the above context, this chapter will provide a strategy for the integration of NMT modes into the transportation system of the Stellenbosch municipal area.

11.1.2 South African Policies and Resources

The following section provides an overview of the current national policy and frameworks which provide guidance on the planning and design of Non-motorised Transport modes and facilities.

White Paper on National Transport Policy (1996)

The White paper on National Transport is the key policy document from which all other transport-related policy documents are formulated in South Africa. The White Paper identifies that the country should strive towards "encouraging efficient land use, promoting rural development, improving accessibility and mobility through appropriate, affordable measures as well as promoting safety, security and reliability of passenger transport." Additionally, government is to "**encourage, promote and plan for the use of NMT where appropriate**."

Rural Transport Strategy for South Africa (2007)

This strategy was developed with the aim of addressing the needs of rural communities in South Africa. One of the goals identified is "the promotion of non-motorised transport" through which the strategy aims to link and align with existing NMT programmes, develop infrastructure for NMT and promote the use of NMT modes.

Department of Transport Draft Policy Document on NMT (2008)

The Draft NMT Policy sets out to increase the use of safe, secure and reliable NMT modes and advocate it as a tool to reduce poverty in South Africa. Safety and the hostile road environment are highlighted as the greatest barriers to NMT use. Animal Drawn Transport (ADT), Cycling and Walking are identified as the three main modes of NMT in South Africa. The policy aims to achieve the following objectives:

- Integration of NMT into transport and spatial planning
- Endorsement of NMT modes
- Development of infrastructure and maintenance standards
- Enhance traffic legislation that recognizes NMT as an alternative transport mode
- Secure funding
- Reduce NMT fatalities

Guidelines for Human Settlement Planning and Design (2003)

This document was prepared to establish a planning framework for settlement-making that is human-centred and people-driven rather than technologically-driven. It explains that the fundamental considerations to be made in settlement planning is that of pedestrian movement and that communities should be designed according to a scale that is based on human movement abilities as opposed to motorised movement so as to reduce car dependency of communities. Furthermore; infrastructure provision should be socially

enabling rather than creating barriers to human movement. In other words, streets should be thought of as public spaces.

Non-Motorised Transport Facility Guidelines (2014)

This document is an update of the previous "*Pedestrian and Bicycle Facilities Guideline*: *Engineering manual to plan and design safe pedestrian and bicycle facilities"* which was published in 2003. This updated guideline document presents a new approach to considering road space in South Africa which focuses on the needs of people rather than the needs of vehicles so as to provide a transportation system that is equitable and sustainable, and ultimately creating livable cities. The guidelines provide direction on how to plan and design for NMT, suggesting typical standards to be adopted for the various infrastructure elements in the transportation environment.

11.1.3 NMT Vision and Objectives

The Stellenbosch Municipality prepared a NMT Policy in 2015 which defines the vision and objectives for NMT implementation in the area and sets the tone for the development of a strategy to realise these goals.

The point of departure for all development is housed in the vision and strategic focus areas identified in the Stellenbosch Integrated Development Plan. These focus areas were highlighted and summarised in *Chapter 2: Transport Vision and Objectives*. A number of these objectives translate into NMT directives and should form the premises for any NMT intervention in the area. Prioritisation of NMT will align to the following IDP focus areas:

- NMT promotes the creation of a "Green Municipality" through provision of a low carbon alternative to motorised transportation thereby reducing air and noise pollution
- Promotion of NMT results in a "Dignified Living" environment through provision of a socially acceptable, safe and convenient mode for travelling short distances thereby creating an equitable transportation system
- The flat topography and compact town centres makes the Stellenbosch Municipality creates the opportunity to invent itself as the NMT capital of South Africa and the "Preferred Destination" by tourists and locals.

The Greater Stellenbosch Spatial Development Plan which was approved in 2012 identifies seven key development principles of which the following relates directly to NMT viz. Create walkable neighborhoods: provide safe spaces to walk and/or cycle between home, work, shops and services

The *Quo Vadis* vision for spatial development in the Municipality is to create a "*compact, sustainable and inclusive town"* and identifies the creation of a public and non-motorised transport system that is accessible within a 500 metre radius of places of work and home as a strategy to reach this goal.

The *Quo Vadis* document provides a strategic informant to the SDF which is in the process of being updated. A new spatial vision is highlighted for the area which calls for the creation of the following:

- Provide public transport for all
- Create walkable neighborhoods
- Sustainable Transit Oriented Development (TOD)
- Integrated mobility network

The above spatial context enforces the need to promote NMT in the area through the creation of compact town centres and transit oriented development trends which limits the extent of urban sprawl and further exacerbation of private travel demand, but rather to promote the use of NMT modes through designing human-centred neighborhoods that facilitate short trips which can be made with NMT modes. This also implies careful integration between transport modes that fully appreciates the role that NMT plays in the greater mobility network.

In light of this urgent need, the Draft NMT Policy strives to “facilitate a mobility environment where all transport modes are of equal importance.”

11.1.4 Status Quo

The majority of the NMT trip origins i.e. residential areas, are located outside of the Stellenbosch CBD area with most of the NMT trip destinations being located within the Stellenbosch town. These destinations have been identified as follows:

- Retail centres / outlets
- Schools
- Crèches
- Stellenbosch University Campus
- Stellenbosch University Residences
- Sports Fields
- Hospitals
- Municipal/ Public Buildings
- Places of Worship
- Industrial Areas
- Corporate/ Business
- Public Transport Facilities (rail stations, bus/ taxi stops and ranks)
- Parking areas

Approximately 80% of the workforce employed in the town also live in the town of Stellenbosch and have trips of less than 5km in distance which is an ideal distance to be

travelled using a NMT mode. This implies a very high potential volume of NMT users should the environment be more encouraging of NMT modes, particularly cycling. Table 11-1 lists the NMT modal share for the Stellenbosch Town. These results are in line with provincial NMT trends which show that the lower income groups tend to use NMT modes whilst the middle to higher income groups prefer to use motorised modes, particularly the private vehicle.

Table 11-1: Non-Motorised Transport Modal Share

Residential Area	Income Group	% Walk	% Cycle
Dalsig	High	0	4
Die Boord	High	2	2
Onder Papegaai	High	3	2
Paradyskloof	High	2	0
Krigeville	High	5	0
Uniepark/ Karindal/ Simonswyk	High	2	4
Central Stellenbosch	Middle-High	11	15
La Colline	Middle-High	16	0
Idas Valley	Lower-Middle	14	2
Cloetesville	Lower-Middle	13	1
Jamestown	Lower-Middle	12	1
Kayamandi	Low	26	1

(Source: US Mobility Study, 2009)

The University of Stellenbosch conducted a trip survey in 2010 to ascertain how its students and personnel travel to the institution. At the time the survey was conducted, approximately 21 000 students were enrolled at the university. Of those who attended class on campus:

- 7 000 (33%) live in or near the core campus,
- 7 000 (33%) live the Stellenbosch town or immediate surrounding area,
- 7 000 (33%) live in surrounding towns or the Cape Metro

Table 11-2 summarises the outcome of this survey from which it can be seen that an alarmingly high proportion of students travel to campus by car with only 22% using non-motorised modes of travel despite the fact that 15 000 students live in the town of Stellenbosch. Of those who do use NMT modes, walking is still significantly preferred over cycling due to a number of reasons which will be explored later.

Table 11-2: Main Mode of Travel for Students and Personnel of the University of Stellenbosch

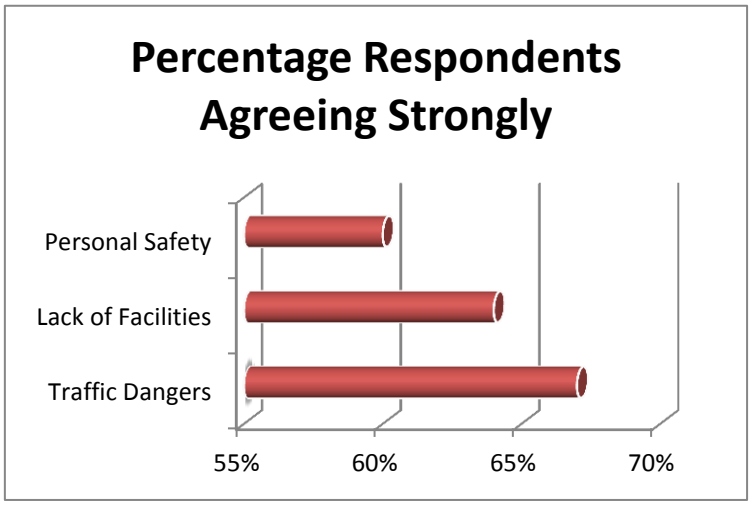
Main mode of Travel to/ from University	Students	Personnel
Car	51%	86%
Motor Cycle	1%	1%
Combination (Mainly Public Transport & Walk)	24%	3%
Public Transport	1%	3%
Bicycle	3%	4%
Walk	19%	3%
Total	100%	100%

In an effort to understand the reason for the low bicycle usage in the town of Stellenbosch, a market survey on cycling was conducted during the development of the Draft Stellenbosch Cycle Plan (2015). The results of this survey provided valuable insight into the potential for increasing cycling as a preferred mode in Stellenbosch as well as the challenges to achieving this.

- Almost 60% of all survey respondents have access to or own at least one bicycle in the household. Bicycle access drops significantly to 37% in lower income households such as in the areas of Kayamandi, Cloetesville and Idas Valley.
- 85% of the respondents either “strongly support” or “support” interventions for improved cycling facilities. A similar response was received from the lower and higher income groups.
- Those who currently have access to a bicycle in their household cited that they would cycle more in the future should the cycling environment improve.

When asked about deterrents to cycling, traffic safety was regarded as the greatest barrier with lack of cycling infrastructure and personal safety concerns following shortly after. See Figure 11-1.

Figure 11-1: Factors Preventing More Widespread Use of Currently Owned Bicycles



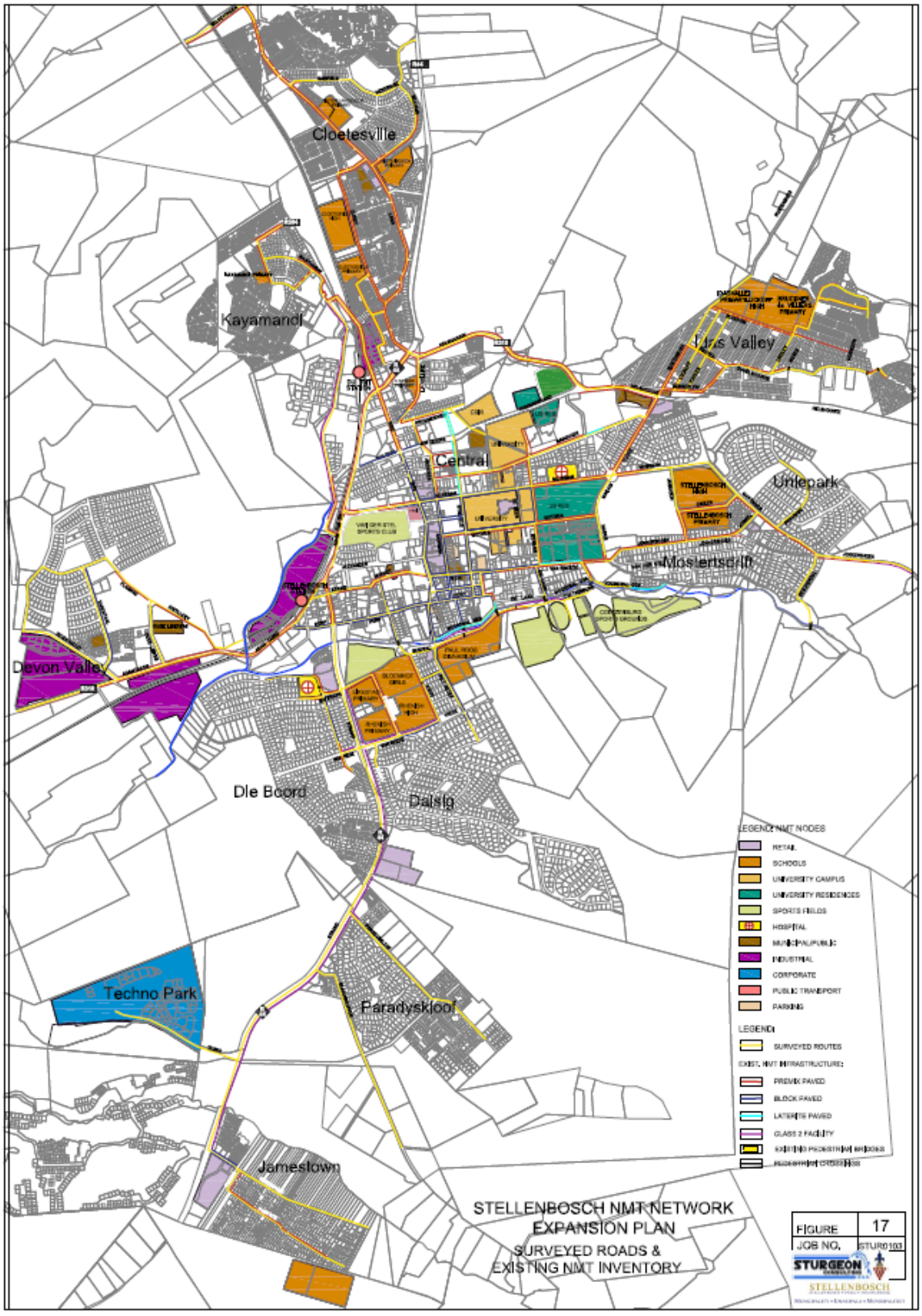
(Source: Adapted from Draft Stellenbosch Cycling Plan, 2015)

A Draft NMT Network Plan was compiled in 2014 which aimed to expand on the NMT network plan developed in 2010. This plan compiled an inventory of all the existing NMT facilities in the municipal area as shown in Figure 11-2. As can be seen a number of NMT items were captured:

- Cycling and pedestrian origins and destinations
- Connections between employment opportunities, public transport facilities and other NMT trip generators
- Potential routes and linkages
- Potential high use NMT corridors based on current projections and projected future travel patterns and connectivity for cyclists and pedestrians
- Problem and constraint areas
- An evaluation of the routes and linkages based on land use, connectivity, accessibility, safety, traffic volumes, road capacity, parking and cost
- An evaluation of corridor route alternatives based on criteria such as street design, accessibility, potential linkages to public transport termini and public gateways, traffic speeds and volumes, safe road crossing, compatibility with public open spaces and natural resources, directness for pedestrians and potential conflicts with other users
- Map of preferred NMT network for each town
- Route quality features such as coherence, directness, attractiveness, traffic safety and comfort.

From Figure 11-2 it can be seen that the majority of NMT infrastructure investment has taken place in the town of Stellenbosch with limited facilities available in the suburbs located on the outskirts of the town. A clearer version of this map can be found in the Draft Stellenbosch NMT Expansion Plan, 2015.

Figure 11-2: Stellenbosch NMT Inventory



(Source: Draft Stellenbosch NMT Expansion Plan, 2015)

Table 11-3 lists a summary of the NMT Inventory findings for the rest of the areas within the Stellenbosch Municipality.

Table 11-3: Summary of NMT Inventory Findings

Municipal Area	Summary of Findings
Franschhoek	Provision of NMT facilities is concentrated around the retail areas and along the R45. There is a paved NMT facility all along the R45 from Franschhoek town to La Motte. There is very limited provision of NMT facilities in La Motte.
Groendal	The main roads running through this area have paved NMT facilities, particularly around the secondary and high schools.
Wemmershoek	There are no NMT facilities in this area which is mainly residential. NMT users and vehicles generally have to compete for space.
Lanquedoc	Of the routes surveyed in this town there are no NMT facilities provided at present and NMT users and vehicles are forced to share the road space.
Pniel	There is a newly block paved NMT facility along Helshoogte Road. The minor roads running through the residential areas generally have paved NMT facilities as well.
Kylemore	The minor roads running through Kylemore generally have a paved NMT facility.
Lynedoch	There is very little provision for NMT in this area.
Vlottenburg	The main road traversing through this area has a paved NMT facility.
Raithby	The main road traversing through this area has a paved NMT facility.
Koelenhof	The main road traversing through this area has a paved NMT facility.
Klapmuts	The main roads traversing through this area generally have paved NMT facilities

11.1.5 Needs Assessment

The collection of information regarding the current NMT infrastructure available along with the cycling market survey has provided valuable insight as to the shortfalls within the NMT system; both in terms of dedicated infrastructure and the operational environment. Of the non-motorised modes used at present, walking is still more commonly used either as the only mode in the trip chain or as a component at some point in the trip chain. Cycling is not used as much as it could be and there is high potential to increase the utilisation of this mode. Three target groups can be identified as immediate focus areas in attempting to improve the use of NMT modes; namely:

- Low income groups
- University students
- Scholars

Low Income Groups:

This group is the predominant user of NMT modes to complete their daily trips for work or education purposes. People who fall in this group are generally located on the outskirts of the town or in smaller rural areas within the municipality and are therefore captive if no alternative affordable mode exists. Safe pedestrian infrastructure connecting the low income residential areas of Stellenbosch town are hence of utmost importance in ensuring promotion of opportunities for these disadvantaged groups. Safe cycling infrastructure connecting both these residential areas and the rural towns to one another and to the Stellenbosch town is crucial in providing a viable alternative to private and public transport which is often unaffordable for a significant proportion of the Municipal residents.

In many low income areas there is a need for sidewalks along local streets or collector roads where the width of the road reserve allows. In some areas, the township layout has been planned that, if traffic volumes are very low, the roadway itself can be used by pedestrians or even as play areas (typically in culs-de-sac).

University Students:

As revealed by the University of Stellenbosch Mobility Survey in 2010, the vast majority of students who live within the town of Stellenbosch prefer to use the private motor vehicle to travel to campus. Students who live within the town of Stellenbosch are ideal candidates for NMT due to the short trip distance and extensive shortage of parking for vehicles around the campus. NMT modes also offer health benefits in increasing the amount of daily exercise without having to dedicate extra (scarce) time for this purpose.

Scholars:

There are a number of schools located within the Stellenbosch Municipality, particularly in the town of Stellenbosch where there are 15 primary schools and 8 high schools. At present there are 13 transport services for learners operating in the municipality which serve the following schools:

- Klapmuts Primary
- Simondium Primary
- Kyelmore Secondary
- St. Idas Primary
- Idas Valley Primary
- Luckhoff Secondary
- Weber Gedenk Primary
- Stellenzicht Secondary
- Cloetesville Secondary
- Lynedoch Primary
- Vlottenburg Primary

- PC Petersen Primary
- Kylemore High
- Raithby Primary
- Nondzame Primary

Despite the availability of learner transport services, most of the schools located within the town of Stellenbosch are not served by these services and these learners are transported to school by their parents using private vehicles. This is a major contributor to the current extreme congestion experienced in the Stellenbosch town, especially in the mornings as the two peaks coincide. Hence there is great benefit in increasing NMT modes use amongst learners, more so those at high school level who are old enough to be aware of good road safety conduct.

In terms of the NMT system requirements, the two main areas which require urgent attention are the availability of infrastructure and facilities for NMT users, such as showers and lockers, and the safety of the users when choosing this form of transportation.

Infrastructure:

There is a widespread lack of formal NMT infrastructure throughout the municipality first and foremost for pedestrians and more so for cyclists. Even where there is existing infrastructure available, the road environment is quite hostile for NMT users thus road safety is one of the common concerns expressed by the public. The layout of street furniture and presence of trees also introduce barriers to NMT users, especially those with special needs.

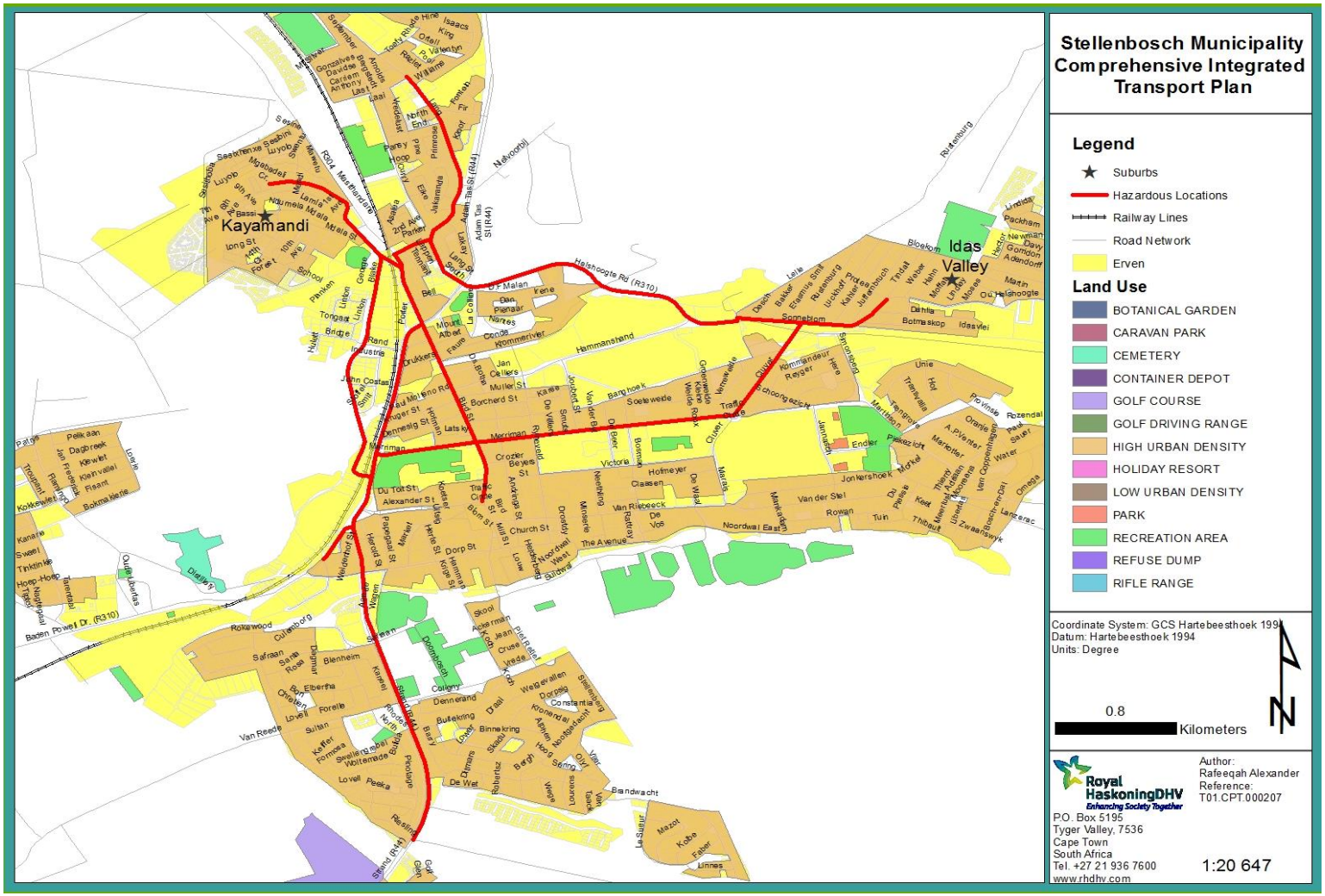
Environment:

There are a number of elements which influence the NMT user experience and consequently whether or not they choose to undertake a trip using an NMT mode or a motorised mode. The perceived poor safety and security is one of the greatest if not most important deterrents to using NMT. A lack of law enforcement and surveillance in an area where crime is prevalent discourages commuters from using both NMT and public transportation. Women, children and Special Needs Passengers (SNPs) are the most vulnerable to crime. Drivers of private vehicles commonly disregard the safety and needs of NMT users and this attitude needs changing.

Accident data for the Stellenbosch Municipality was obtained from the Stellenbosch Traffic Department and analysed to extract all the accidents involving a pedestrian or cyclist. Links on which two or more accidents involving pedestrians were identified from the data indicate which areas and/or road links are dangerous for NMT users. These links will be prioritised for future investment in NMT infrastructure to improve safety of NMT users, who are the most vulnerable road users. These links are depicted in Figure 11-3. As can be seen below, the road links providing access to the Stellenbosch town which also function as mobility routes for motorised vehicles pose the greatest danger to NMT users due to higher operating speeds. Residents located in the outer areas of Stellenbosch often cannot afford to use private or public transport and so are forced to use NMT modes for their daily commutes hence the presence of NMT users on these links. These same links are also on minibus taxi

routes therefore many commuters are picked up and dropped off from where the remainder of the journey is completed on foot. A number of these hazardous links are also concentrated in the high density areas of Stellenbosch such as along Merriman Avenue where there are numerous trip attractions, consequently high volumes of pedestrians and motorised vehicles are constantly in conflict in this area.

Figure 11-3: Hazardous Locations in the Stellenbosch Municipality



From site visits it was found that NMT users travelling from Kayamandi into town prefer to use Rand Road (Figure 11-4) as opposed to Bird Street as this route is more direct and less motor vehicle traffic. However; this route poses a safety threat as NMT users are forced to cross the railway line at the Kayamandi Mall at an unprotected informal rail crossing. This is shown below in Figure 11-5.

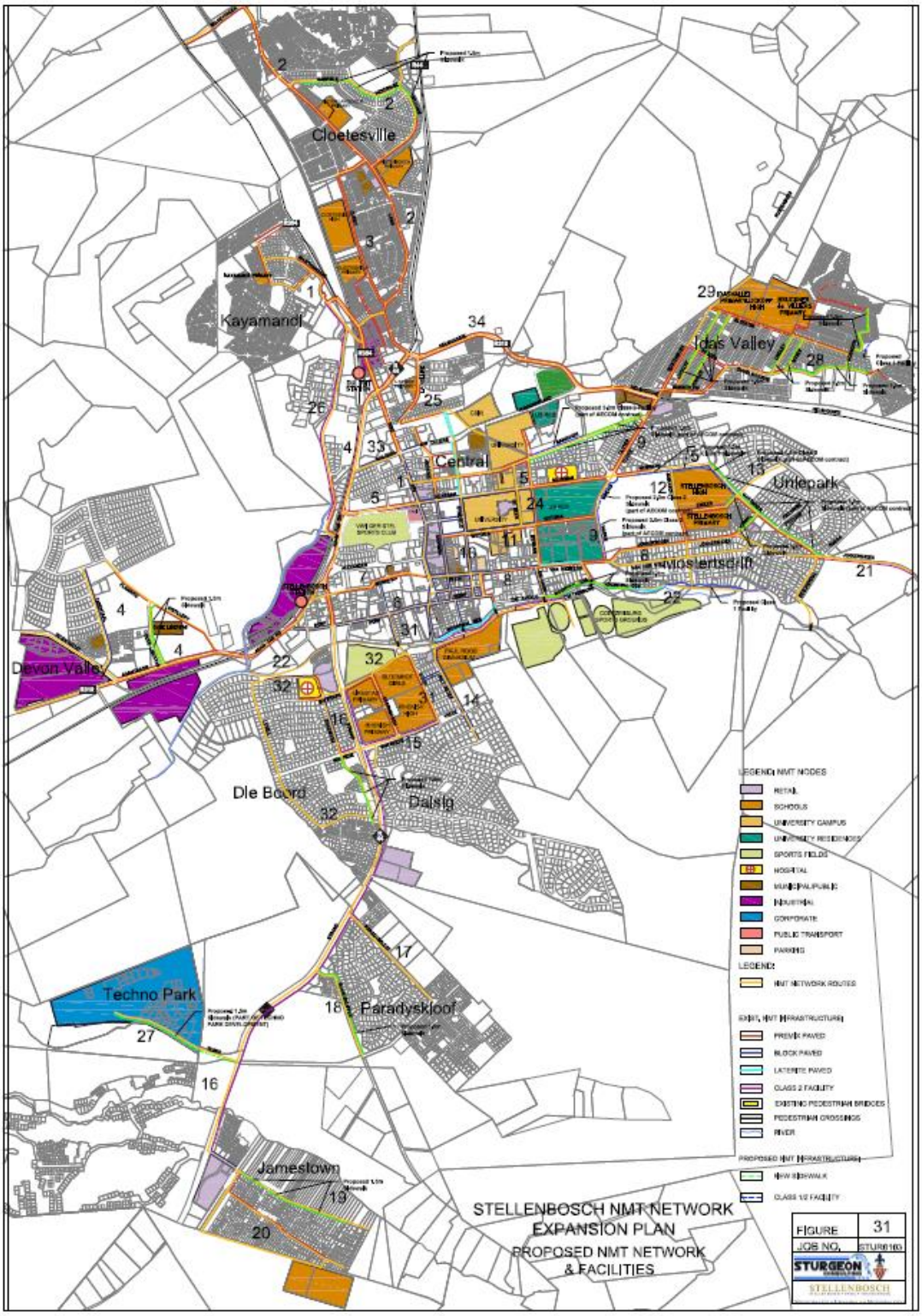
Figure 11-4: Rand Road, Kayamandi

Figure 11-5: Dangerous Rail Crossing at Kayamandi Mall

11.1.6 Proposed NMT Network

Following the assessment of the existing NMT network in the Municipality a proposed network plan was prepared in 2015, this is shown in Figure 11-6. A clearer version of this map can be found in the Draft Stellenbosch NMT Expansion Plan, 2015.

Figure 11-6: Proposed Stellenbosch NMT Network Plan

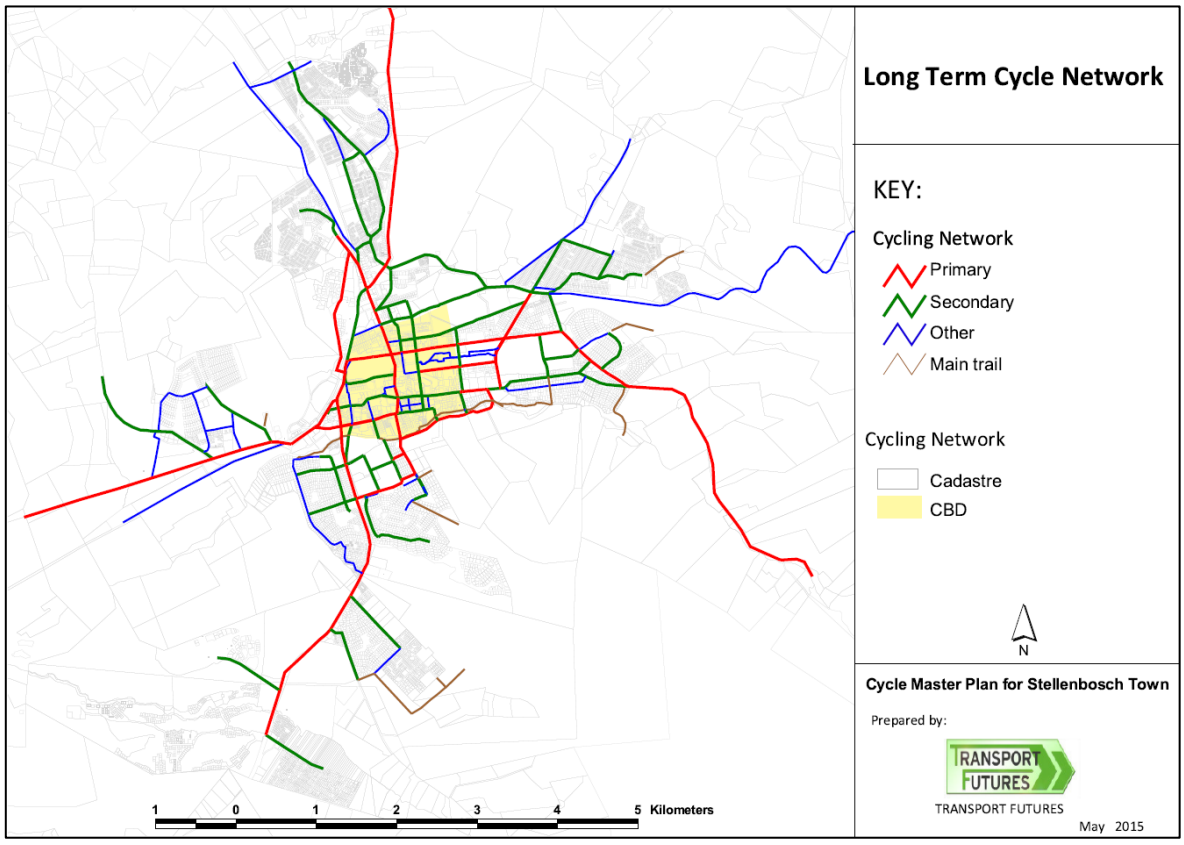


(Source: Sturgeon Consulting, 2015)

From Figure 11-6 it can be seen that the proposals for new NMT infrastructure consist of either a new sidewalk or a class 1 or 2 NMT facilities. New sidewalks are mainly proposed in the outer suburbs of Stellenbosch such as Idas Valley, Cloetesville, Paradyskloof, etc. Class 2 sidewalks are proposed within the town of Stellenbosch along Banghoek, Merriman, Marais and Noordwal Oos Roads. Proposed NMT network improvements for the remaining areas of the Stellenbosch Municipality are contained in the Annexure.

Further to the above NMT network plan is a bicycle masterplan which has been prepared in 2015. This plan is depicted in Figure 11-7. The mobility spines providing access to the town of Stellenbosch as well as a few roads within the town will form the primary cycling network where dedicated cycle facilities should be provided (Class 1, 2 or 3). The secondary network penetrates the residential and urban core and will operate as a supporting feeder network serving needs for cyclists wanting to make short trips. “Other” links identified are already operating as routes for cycling which are in need of safety improvements or these links offer a finer level of cycle accessibility.

Figure 11-7: Proposed Cycle Network



(Source: Transport Futures, 2015)

Table 11-4 lists interventions identified in the 2015 NMT Plan and indicates which of those overlap with interventions identified in the 2015 Bicycle Masterplan. There is a still a need for these plans to be integrated and this will happen at preliminary design stage where more detailed information relative to each local context will be available. In addition to facilities the

Network Plan includes bicycle distribution, traffic calming, road traffic management and communication.

11.1.7 Proposed Projects

Analysis of the current NMT infrastructure and the needs arising has led to the projects identified in Figure 11-6 and Table 11-5 for the town of Stellenbosch and the remaining municipal towns respectively.

Table 11-4: Projects Identified in the Town of Stellenbosch

No.	Suburb	Project Description
1	Cloetesville	Sidewalk along Williams Rd between Iscaacs Rd and Hendrikse
2	Cloetesville	Sidewalk along Hendricks Rd between Williams and Gabriels
3	Cloetesville	Sidewalk along Gabriels Road between Lang and Hendricks
4**	Devon Valley	Sidewalk on western side along Oude Libertas Road between Adam Tas and resident access
5**	Devon Valley	Sidewalk along Oude Libertas on eastern side between Adam Tas and Flamingo
6**	Jamestown	Sidewalk along Webbersvallei Rd between Fresno and Titan
7	Die Boord	Sidewalk along Rhodes Noord Road between Van Reede and Lovell
8	Idas Valley	Sidewalk along Luckoff Road
9	Idas Valley	Sidewalk along Kahler Road
10**	Idas Valley	Sidewalk along Lindley Road
11	Idas Valley	Sidewalk along Moses Road
12**	Idas Valley	Sidewalk along Ou Helshoogte Road between Moses and Gorridon
13	Idas Valley	Sidewalk along Gorridon Rd-Langeveld Rd-Davey Rd-Van Dyk Rd-Lindida Rd
14	Idas Valley	Class 1 facility across Public Open Space
15*	Banghoek Road	3m class 2 facility on northern side along Banghoek Rd
16*	Banghoek Road	1.5m sidewalk on southern side along Banghoek Rd
17*	Marais Road	2m cycle path on western side between Van Riebeek and Victoria plus 3m cycle path between Victoria & Merriman

No.	Suburb	Project Description
18*	Marais Road	3m sidewalk on eastern side along Marais Street between Van Riebeek & Victoria plus 2 m sidewalk between Victoria & Merriman
19*	Martinson Road	1.5m sidewalk on eastern side along Martinson Road between Simonsberg and Omega
20*	Martinson Road	4m class 2 cycle lane on western side along Martinson Road between Merriman and Bosch-en-Dal
21*	Martinson Road	3m cycle path on western side along Martinson Road from Bosch-en-Dal along Jonkershoek to side access
22*	Martinson Road	1.5m class 2 sidewalk on western side along Martinson Road from Merriman to Endler
23**	Merriman Avenue	Class 2 1.5m sidewalk on southern side along Merriman Avenue between Cluver/Marais/Merriman roundabout and Martinson
24**	Endler Road	1.5m sidewalk on northern side along Endler Road
25**	Morkel Road	1.5m sidewalk on northern side along Morkel Road
26**	Paradyskloof	1.5m sidewalk on eastern side along Blaauwklippen Road between R44 and Wildebosch Street
27**	Techno Park	1.5m sidewalk on eastern side along Techno Drive (part of Techno Park Development)
28	Mostertsdrift	1.5m sidewalk on southern side along Noordwal Oos Road between Die Laan and Coetzenburg Road
29	Mostertsdrift	1.5m sidewalk on southern side along Noordwal Oos Road between Coetzenburg Road and Koloniesland residential
30**	Mostertsdrift	Class 1 facility along northern side of Eerste River 'Wandelpad'

*Part of AECOM Design and Construction Contract

**Overlaps with cycle plan therefore integration of designs required

Table 11-5: Projects Identified in the Stellenbosch Municipal Towns

No.	Town	Project Description
31	Raithby	Sidewalks along Hendriks St, across path and portion of Watson Way (west)
32	Raithby	Sidewalks along Shaw St and Carelse St
33	Lynedoch	Sidewalks along Lynedoch Rd

No.	Town	Project Description
34	Koelenhof	Class 1 NMT link from development driven area north of Kromme Rhee Road to link to Koelenhof Station
35	Klapmuts	Sidewalks along Pickering St & Beyers St, upgrade of existing Class 1 gravel facility through POS area between Merchant St & Beyers St
36	Klapmuts	Sidewalks along Adams St & Mechant St
37	Klapmuts	Class 1 NMT facility through Public Open Space areas
38	Pniel	Sidewalk along Hoof Rd
39	Pniel	Sidewalk along Silvermine St from Helshoogte Rd approx 150m
40	Lanquedoc	Sidewalks along Hoof Rd from Helshoogte up to bend after bridge
41	Lanquedoc	Sidewalk along Hoof Rd from bend into Lanquedoc centre up to Vygie St
42	Wemmershoek	Sidewalk along Angelier St between R301 and Prinsn Africa Dr (to Community Hall)
43	Wemmershoek	Sidewalk along Prinsn Africa Dr between Angelier St & Protera St
44	Wemmershoek	Sidewalk along Protera St between Prinsn Africa Dr & Angelier St
45	Kylemore	Sidewalk along Petunia St between Skool St and Arim St to new public transport stop
46	La Motte	Sidewalk along Bergendal St on northern side between DR1351 and Akkerhout St
47	Groendal	Sidewalk along Jafthas St from Boonzaaier to Groendal High School (including zebra crossing)
48	Groendal	Sidewalks along Angelier St from Davids St to Dalubuhle Primary School
49	Groendal	Laterite paths through Langrug
50	Groendal	Class 1 NMT (2m) facility along river on western side from existing to Dalubuhle school
51	Franschhoek	Sidewalk along De Villiers St between Dirkie Uys St and R45 (MR191) over concrete channel

No.	Town	Project Description
52	Franschhoek	Sidewalk along Uitkyk St between R45 (MR191) and Chamonix wine cellar
53	Franschhoek	Sidewalks along Dirkie Uys St between De Villiers St and Lambrechts Rd (MR191) - adhoc locations
54	Franschhoek	Sidewalk along Reservoir East St between Akademie St and Calais

A number of interventions have been identified from the Stellenbosch Cycle Plan (2015).

11.1.8 Prioritisation of Interventions

Prioritisation of projects is always contentious therefore the procedure used should be transparent and systematic in order to ensure that all areas are treated fairly. It is proposed that the following performance indicators be used in the order of listing when prioritising projects to be implemented.

- **Value of Safety Improvement:** Interventions which offer the greatest levels of improvement in safety for NMT users should be prioritised for implementation. Therefore; projects located along hazardous routes or intersections (refer to Figure 11-3) must be given preference over the rest as these locations presently have the highest pedestrian-vehicle collision statistics in the Stellenbosch Municipality.
- **Network Completion:** Interventions which include adding missing links to the present NMT network as these address demands for which there is no supply at present.
- **Network Enhancement:** Interventions including upgrades to existing NMT infrastructure that is over-utilised or does not adequately serve the present demand and needs of NMT users. Interventions which serve important NMT nodes should also be prioritised.
- **Improving Community Life:** Interventions which contribute towards creation and promotion of dignified living in the communities of Stellenbosch and concurrently the development of walkable communities.
- **Ease of Implementation:** Projects that are simple (and less costly) to implement can be prioritised to improve the progress of NMT network investments.
- **Cost of Implementation:** Projects that are less costly are easier to fund.

11.1.9 NMT Projects Planned

The following projects are planned for implementation over the next three financial years as listed in the Municipal Budget:

- Traffic Calming Master Plan: Design - WC024
- Traffic Calming Projects: Implementation - Stellenbosch
- Traffic calming projects: Implementation - Kayamandi
- Traffic calming projects: Implementation - Franschhoek
- Traffic calming projects: Implementation - Klapmuts
- Traffic calming projects: Implementation - Pniel / Kylemore
- Helshoogte Pedestrian Crossings
- Kayamandi Pedestrian Crossing (R304, river and railway line)
- Pedestrian and Cycle paths
- Pedestrianisation of Church and Andringa Streets
- Detailed Cycle Plan & Implimentation
- Update of NMT Plan and expanding coverage in WC 024
- Traffic Calming Master Plan for all built-up areas
- Bicycle Lockup Facilities

The planned investment in NMT over the next three financial years amounts to R 5 600 000.

11.2 PUBLIC TRANSPORT SAFETY AND SECURITY

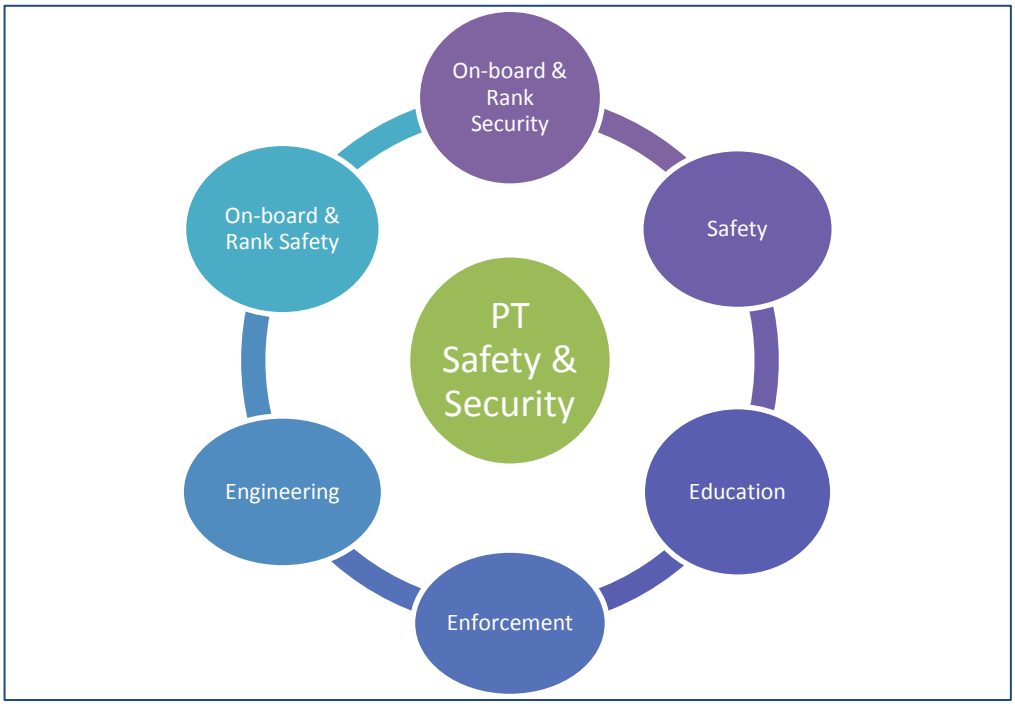
SYNOPSIS: PUBLIC TRANSPORT SAFETY AND SECURITY

- Safety and security concerns are one of the main deterrents for potential public transport users. A strategy has been developed to address these concerns in an effective manner.
- The following strategy is proposed:
  - The maintenance and improvement of lighting at all the public transport facilities to improve the safety of commenters at night.
  - The establishment of a data base of crime incidences at public transport facilities and on-board vehicles.
  - A study be done to establish the levels and type of protection services available in rural and urban public transport systems to effectively tailor a strategy to the various communities.
  - The auditing of public transport infrastructure design projects against security criteria developed by the CSIR.
  - The cleaning of public transport facilities of litter and graffiti so as to create a sense of safety amongst commuters who use the facility.

Safety and security concerns are often cited as the main deterrent for potential public transport users. This is over and above general safety and security issues experienced by South Africans on a daily basis. This section seeks to develop a strategy to address these concerns in an effective manner.

Public transport safety and security is a multi-faceted problem as illustrated in Figure 11-8 below. Each element should be targeted in a fashion that is most suitable to mitigating that particular issue.

Figure 11-8: Public Transport Safety & Security Elements



Each element plays the following roles in contributing to the overall safety and security of the public transport system in Stellenbosch Municipality:

Safety: This refers to the general well-being of commuters when using the public transport system and therefore applies to any point in the commuter's trip chain i.e. en-route to the public transport pick-up point, waiting at the pick-up point, etc.

Education: The safety of commuters can be compromised through lack of safety and security awareness. This is particularly relevant for children and tourists. Users should be educated on how to improve their personal safety and security when using public transport.

Enforcement: This refers to the extent to which the law is upheld when monitoring the public transport system. This entails examination of vehicle roadworthiness, driver's license validation and surveillance for crime. Improved enforcement always has the effect of reducing crimes and improving the safety of not only public transport users but all commuters in general.

Engineering: The design of all elements of the public transport system should not compromise the safety of its users in any way.

On-board & Rank Safety: Safety of commuters when in and waiting for public transport vehicles at ranks and terminals must be promoted.

On-board & Rank Security: Security of commuters when in and waiting for public transport vehicles at ranks and terminals must be promoted.

In light of the afore-mentioned public transport safety and securing components, a number of pertinent issues within the Stellenbosch Municipality are apparent. The first area of concern is the safety and security at the mini-bus taxi ranks. The Bergzight formal rank (Figure 11-9 a)) has very good surveillance features such as CCTV cameras and security personnel; however the remaining ranks which are all informal have no security features. Figure 11-9 b) depicts the informal taxi rank at Klapmuts where night-time operations rely on the street lighting for illumination.

Figure 11-9: a) Bergzight and b) Klapmuts Mini-bus Taxi Ranks

The second area of major concern is the present informal rail crossing at the Kayamandi Mall which connects the Kayamandi Bridge and Kayamandi Mall taxi ranks. Commuters are completely exposed to the trains that operate along this line with no safety officer present to ensure that commuters do not cross when there is an oncoming train. The Stellenbosch Municipality should collaborate with PRASA to formalise this crossing thereby improving the safety of its users. Figure 11-10 illustrates this crossing.

There are two level crossings that fall within the Stellenbosch Municipality jurisdiction, which are Kayamandi and Koelenhof. In a quest to eliminate level crossings PRASA has the following proposals:

- Kayamandi – This is a pilot project between PRASA and RSR whereby fencing and a gate, that will be controlled from Eerste River Train Control Office, will be provided. The project will include the provision of the crossing surface alignment and appropriate signage.
- Koelenhof – A feasibility study was initiated and completed during the 2013/14 financial year focusing on providing a Road over Rail structure to eliminate the level crossing at grade. Various scenarios were developed and a preferred option was selected through the further EIA and consultative process that followed. It is expected that construction will commence in 2016/17 financial year.

Figure 11-10: Rail Crossing at Kayamandi Mall

In hindsight of the topics raised above the following strategy is proposed:

- Lighting at all the public transport facilities should be provided and maintained to improve the safety of commenters at night.
- A data base of crime incidences at public transport facilities and on-board vehicles should be established.
- A study should be done to establish the levels and type of protection services available in rural and urban public transport systems to effectively tailor a strategy to the various communities.
- Public transport infrastructure design projects should be audited against security criteria developed by the CSIR.
- Public transport facilities should be cleaned of litter and graffiti so as to create a sense of safety amongst commuters who use the facility.

12. FUNDING STRATEGY AND SUMMARY OF PROPOSALS AND PROGRAMMES

SYNOPSIS:

- The key focus of projects, proposals and budgets of the CITP is to enable and contribute to economic growth, improved accessibility, equitable transport for all and a safe environment while ensuring environmental sustainability and good governance.
- The projects and proposals contained in this CITP comprise the following project types:
  - **Roads and Stormwater:** Maintenance, road construction and upgrading, street lighting and construction projects such as parking areas.
  - **Traffic Engineering:** Traffic calming, signage, traffic signals, intersection improvements, road marking, road safety improvements.
  - **Non-motorised Transport:** Sidewalks, lock-up facilities for bicycles, pedestrianisation projects, cycle tracks and shared facilities.
  - **Public Transport:** Public transport facilities (ranks, railway stations, shelters)
  - **Support Infrastructure and Vehicles:** Upgrading of municipal facilities and the purchasing of vehicles.
  - **Planning**: Preparation of integrated transport plans and strategies, feasibility studies, masterplans.
- The proposed Stellenbosch Municipality CITP Five Year Budget comprises an average spend over five years (2016/17 – 2020/21) of R 270 000 000 including major new projects that could be implemented in stages.
- The primary sources of funds are the Stellenbosch Municipality and the Western Cape Government. It is proposed that the Public Transport Service Network be funded from the Public Transport Network Grant (PTNG) and that applications in the standard format be submitted to the Department of Transport in this respect.
- It is recommended that to ensure that additional funding is provided to implement high priority transport projects in the Stellenbosch Municipal Area:
  - A Committee be appointed by the Stellenbosch Municipality with representation from the relevant Municipal Departments, the Western Cape Government and other relevant agencies to formulate firm proposals for the funding of the projects listed in the CITP Five Year budget.
  - The Stellenbosch Municipality establish a Municipal Land Transport Fund into which the funds must be paid for use in implementing the CITP.

12.1 INTRODUCTION

According to the Vision and Objectives of the CITP (Chapter 2), the projects, proposals and budgets of the CITP should enable and contribute to economic growth, improved accessibility, equitable transport for all and a safe environment while ensuring environmental sustainability and good governance. The key focus areas of the CITP are thus on projects that improve accessibility for all modes by reducing traffic congestion and encouraging the use of public and non-motorised transport.

A well-managed transport system will encourage investment in the area and provide for the needs of the ever growing tourist industry.The key focus areas that are a high priority to receive adequate funding are:

- Basic needs such as meeting backlogs in the maintenance of roads and the provision of roads and stormwater infrastructure,
- The implementation of a safe, affordable and convenient public transport system for all citizens and
- The provision of a safe environment for motorised and non-motorised transport.

The Stellenbosch Municipality's approved Capital Budget, on which the CITP five year budget is based, focuses on these key areas and has allocated funding, largely from the municipal coffers. Funding from municipal sources alone is; however, insufficient to implement high impact projects within a relatively short time and to make inroads into the ever increasing traffic congestion, air pollution and an unscheduled, poor quality public transport system for residents and tourists alike.

The implementation of the Adam Tas Transit Oriented Development proposals to relieve traffic congestion and encourage the redevelopment of the area is a high impact project.

Funding from the Western Cape Government is focused on the maintenance and improvement of major provincial roads and stormwater infrastructure; however a solution needs to be found to alleviate traffic congestion on the provincial road network within the Stellenbosch built up area. Proposals for the implementation of an alternative mobility corridor for the town of Stellenbosch are environmentally sensitive and funding needs to be set aside for detailed route location studies and environmental scoping.

For the above reasons, additional, innovative funding sources need to be explored. The Funding Strategy in section 12.3 below makes proposals to obtain additional funding from current and other additional sources to fund the CITP Five Year Budget.

12.2 SUMMARY OF PROPOSALS

The projects and proposals contained in this CITP comprise the following project types:

- Roads and Stormwater: Road and stormwater maintenance, road construction and upgrading, street lighting and construction projects such as parking areas.

- Traffic Engineering: Traffic calming projects, signage, traffic signals, intersection improvements, road marking equipment and vehicles, road safety improvements.
- Non-motorised Transport: Sidewalks, lock-up facilities for bicycles, pedestrianisation projects, cycle tracks and shared use facilities.
- Public Transport: Public transport facilities (ranks, shelters)
- Support Infrastructure and Vehicles: Upgrading of municipal facilities and the purchasing of vehicles.
- Planning: Preparation of integrated transport plans and strategies, feasibility studies, masterplans.

The proposed Stellenbosch Municipality CITP Five Year Budget, including the above project types, is summarized in Table 12-1. The total budget over 5 years is R 1 357 730 000.

Table 12-1: CITP Five Year Budget Summary

Project Category	Annual Budget (R)				
	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Transport Management	2 925 000	6 125 000	4 325 000	3 025 000	1 175 000
Transport Infrastructure	116 222 000	156 509 000	360 092 000	292 977 000	2 500 000
Safely Home	32 775 000	24 900 000	5 700 000	7 480 000	4 000 000
Public Transport	22 740 000	18 990 000	103 650 000	147 660 000	9 160 000
Tourism	50 000	50 000	50 000	50 000	50 000
NMT and Sustainable Transport	1 100 000	11 450 000	12 000 000	5 500 000	4 500 000
GRAND TOTAL BUDGET REQUIRED PER ANNUM	175 812 000	218 024 000	485 817 000	456 692 000	21 385 000
GRAND TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS	1 357 730 000				

12.3 FUNDING STRATEGY

12.3.1 Policy and Legislation

The National Land Transport Act (Chapter 3) provides for funding options to implement the CITP as follows:

- The establishment of a Municipal Land Transport Fund
- Public Transport User Charges
- The provision of funds for transport by the national Minister of Transport
- The provision of funds for land transport by the MEC

To date the national Minister of Transport has made substantial funding available to some Municipalities for the implementation of Integrated Public Transport Networks. The Western Cape Government has funded the preparation of Integrated Transport Plans - in addition to the funding of the provincial road network in the Stellenbosch Municipal area. Other government grants are available to Municipalities e.g. the Municipal Infrastructure Grant (MIG). Although some funding has been allocated to the Stellenbosch Municipality from the MIG, additional funding should be sourced for eligible projects e.g. sidewalks and cycle tracks and public transport facilities (basic services).

12.3.2 Implementation Agent / Responsibility

The primary responsibility for the implementation of the CITP rests with the Stellenbosch Municipality. However projects that are the responsibility of other agencies or bodies and who are the implementation agency for projects that fall within the Stellenbosch Municipality, are also included in the CITP. These are the Provincial Government, and parastatals e.g. PRASA. The CITP budget contained in Table 12-3 lists the proposed CITP budget. A column has been included in the table indicting the Funding Source in respect of each project. Generally the agency providing the funding is the implementation agent except where the funding source is a Government Grant to the Stellenbosch Municipality eg the Municipal Infrastructure Grant (MIG).

12.3.3 Funding Sources

Table 12-2 indicates the proposed sources of funding to implement the Stellenbosch Municipality CITP Five Year Budget. The proposed sources of funding are the following:

- SM: Stellenbosch Municipality Capital Replacement Reserve
- MIG: Municipal Infrastructure Grant (Department of Cooperative Governance and Traditional Affairs)
- WCG: Western Cape Government
- EDSM: Electricity Demand Side Management Grant
- PTNG: Public Transport Network Grant
- PRASA: Passenger Rail Agency of South Africa
- US: University of Stellenbosch

Table 12-2: CITP Five Year Budget – Funding Sources

Funding Source	Annual Budget (R)					Source Total
	2016/2017	2017/2018	2018/2019	2019/2020	20120/2021	
SM	53 050 000	103 775 000	137 725 000	17 405 000	12 225 000	324 180 000
MIG	6 540 000	3 890 000	0	0	0	10 430 000
WCG	91 722 000	77 359 000	235 042 000	290 477 000	0	694 600 000
EDSM	10 000 000	10 000 000	0	0	0	20 000 000
PTN Grant	10 000 000	10 000 000	101 250 000	146 910 000	9 160 000	277 320 000

Funding Source	Annual Budget (R)					Source Total
	2016/2017	2017/2018	2018/2019	2019/2020	20120/2021	
PTN Grant / SM	2 500 000	2 500 000	0	0	0	5 000 000
MIG / SM	0	10 000 000	10 000 000	0	0	20 000 000
WCG / SM	500 000	500 000	600 000	900 000	0	2 500 000
PRASA / SM	1 500 000	0	200 000	0	0	1 700 000
US / SM	0	0	1 000 000	1 000 000	0	2 000 000
GRAND TOTAL BUDGET REQUIRED PER ANNUM	175 812 000	218 024 000	485 817 000	456 692 000	21 385 000	
GRAND TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS	1 357 730 000					

The primary sources of funds are the Stellenbosch Municipality and the Western Cape Government. It is proposed that the Public Transport Service Network be funded from the Public Transport Network Grant (PTNG). Funding from the MIG is not significant and it is proposed that additional funding from this source be applied for. Funding from PRASA should be urgently sought for the implementation of necessary station and corridor improvements.

The report on Transit Oriented Development (TOD) prepared for the Stellenbosch Municipality in 2014, contains a detailed analysis of potential funding sources to implement proposals to implement a multi-modal transport system in the Adam Tas Corridor and to provide for additional growth and redevelopment opportunities. A summary of this analysis is provided below as an overview of the funding options that can be pursued to implement projects in the CITP Five Year Budget that are currently unfunded. Further details can be obtained in the TOD document.

The diagram shown in Figure 12-1 indicates the primary sources of funding for municipal projects:

STELLENBOSCH

STELLENBOSCH • PNIEL • FRANSCHHOEK

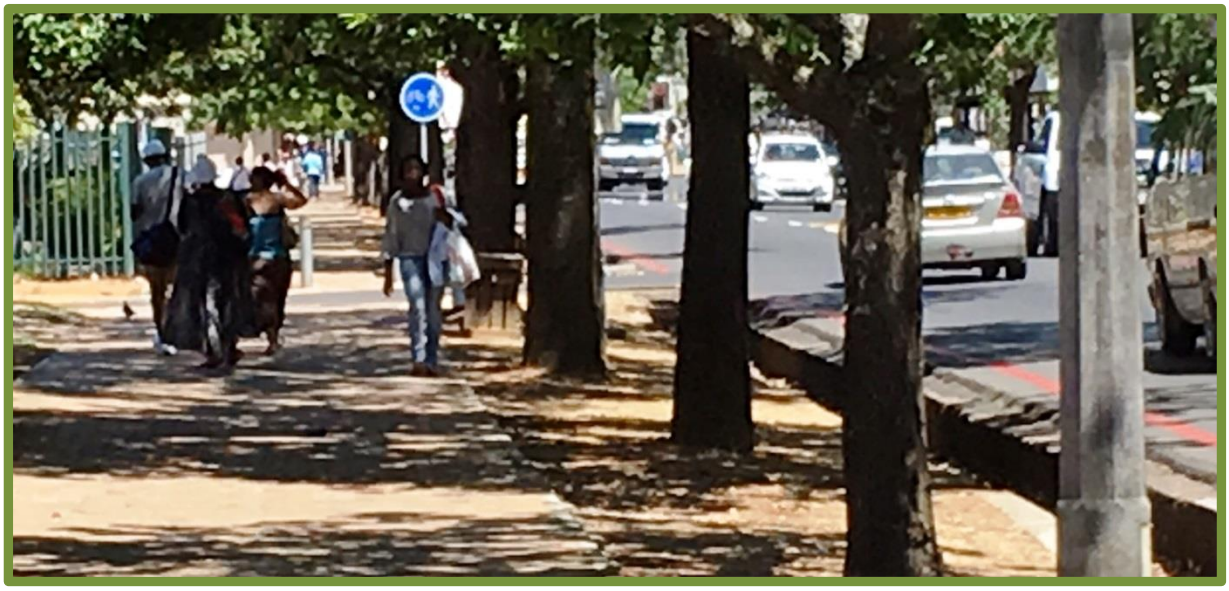
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

INNOVATION CAPITAL
ISIXEKO ESIZA NENGUQU
INNOVASIESTAD

COMPREHENSIVE INTEGRATED TRANSPORT PLAN

PART 4 OF 4

2016 – 2020

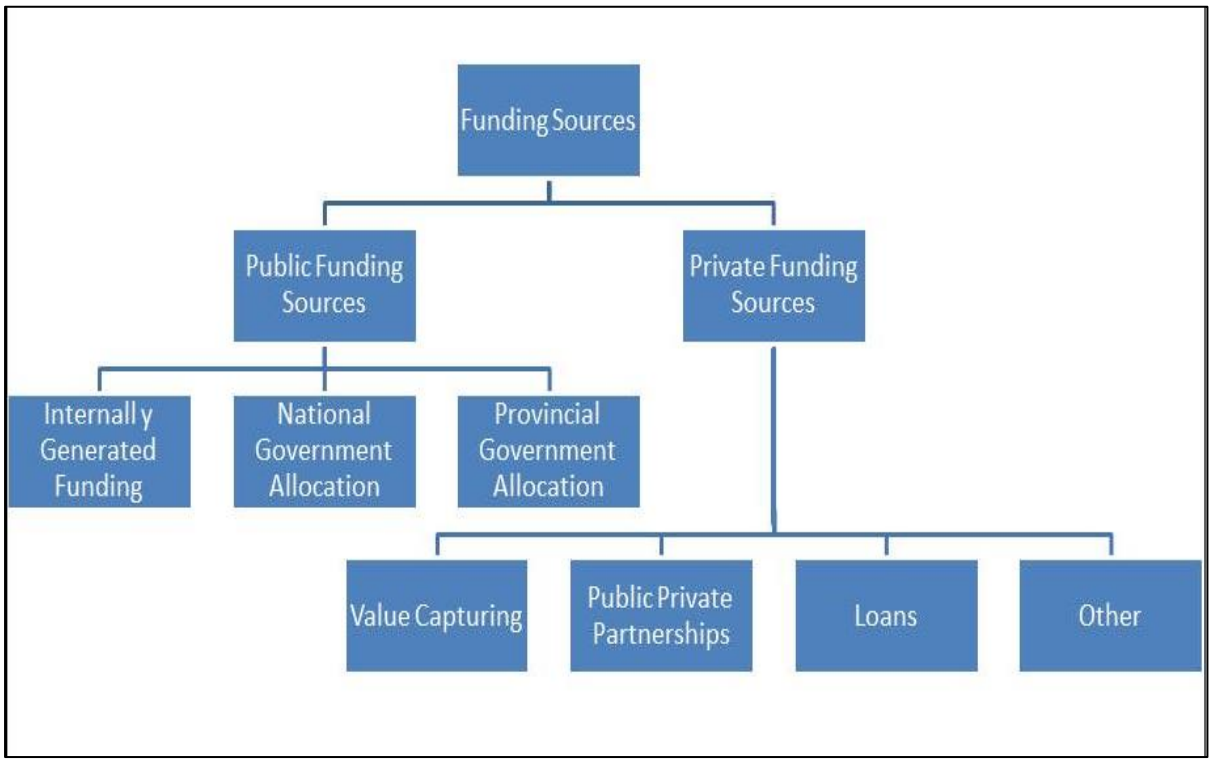


Final Report for Council Approval:

12 February 2016

Royal HaskoningDHV
Enhancing Society Together

Figure 12-1: Funding Sources



Source: Stellenbosch Municipality – Report on Transit Oriented Development (TOD) - 2014

Potential sources of funds are:

- Public Funding Sources:
- Internally Generated Funding: Property Rates and Taxes
- National Government Allocations: Unconditional allocations (equitable share) and Conditional allocations (Grants including MIG, Neighborhood Development Partnership Grant, Public Transport Network Grant, Public Transport Operations Grant)
- Provincial Government Allocations
- Private Funding Sources:
- Value Capturing: Property taxes arising from new investments
- Private Public Partnerships: Concessions or Availability-based
- Loans
- Other: User charges, Advertising Rental of property

At this stage, the Municipal Land Transport Fund (MLTF) has not been established by the Stellenbosch Municipality in terms of the NLTA. The purpose of the MLTF is to defray the cost of the functions of the Municipality in terms of the NLTA and to cover expenditure in terms of the CITP. Funds received from any of the abovementioned sources must be paid into the MLTF. To date very few of the above funding mechanisms have been implemented

by Municipalities except the MIG and the PTN Grant. It is proposed that more focus be given to obtaining funding from other sources. This can best be achieved with the support of the Western Cape Government and other adjacent Authorities, particularly the City of Cape Town. A joint "funding" committee should be established to facilitate and guide the process.

12.3.4 Recommendations

In order to ensure that additional funding is provided to implement high priority transport projects in the Stellenbosch Municipal Area, it is recommended that:

- A Committee is appointed by the Stellenbosch Municipality with representation from the relevant Municipal Departments, the Western Cape Government and other relevant agencies with the objective of formulating firm proposals for the funding of the projects listed in the CITP Five Year budget.
- The Stellenbosch Municipality establish a Municipal Land Transport Fund into which the funds must be paid for use in implementing the CITP.

12.4 PRIORITISATION OF PROJECTS

The Stellenbosch Municipality is currently preparing a prioritisation methodology which will in future be used to guide expenditure according to the development philosophy of the Municipalitry contained in the Integrated Development Plan. Until the methodology has been finalised and approved, the implementation priority of the projects listed in the CITP budget have been based on the approved budgets of the Stellenbosch Municipality and the Western Cape Government respectively. There is however some flexibility in that urgent projects can be brought forward should it be required.

The public consultation process documented in Chapter 13: Stakeholder Consultation, has resulted in the identification of the following projects as the highest priority for attention in the CITP:

- Land use and transport planning
- Parking and
- The need for a public transport service

The above priorities identified by stakeholders should be taken into cognisance when identifying implementation programmes and budgets.

12.5 BUDGET PER PROJECT AND PROGRAMME

Table 12-3 indicates the CITP Five Year Budget for the period 2015/16 – 2019/20. The budget includes both the approved Stellenbosch Municipality's Three Year Capital Budget for the period 2015/16 – 2017/18 and the Western Cape Government's approved Five Year Budget for the period 2015/16 – 2019/20.

The funding sources are indicated in Table 12-3 and are summarized in Table 12-2, above according to the individual source of funding.

Projects in years four and five of the CITP Five Year Budget, to be implemented by the Stellenbosch Municipality, are new projects for which funding has not been approved and for which additional funding is required. These include the following two major projects:

- Provision and Improvement of Parking Areas in Stellenbosch
- Planning and Implementation of an Integrated Public Transport Network

The following projects are proposed for funding by the Western Cape Government:

- MR174 (R304) - Second Carriageway from N1 to Stellenbosch
- MR172 - Rehabilitation between Helshoogte and Boschendal, including landscaping
- MR166 - Rehabilitation, resealing of 1km of DR1039 and Upgrade of 1.2km of DR1043

Table 12-3: Comprehensive Integrated Transport Plan: Five Year Budget 2015/16 – 2019/2020

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TRANSPORT MANAGEMENT													
TM001	Vehicles Replacement	200 000	250 000	250 000	250 000	250 000	Operational	SM	X				
TM002	Furniture, Tools and Equipment : TR&Stw	100 000	100 000	100 000	100 000	100 000	Operational	SM				X	
TM003	LDV: Roads and signs Maintenance	250 000	0	0	0	0	Operational	SM	X				
TM004	Furniture, Tools and Equipment : Traffic Engineering	75 000	75 000	75 000	75 000	75 000	Operational	SM	X				
TM005	Specialised vehicle and equipment (Roadmarking Machine + Trailer)	0	700 000	0	0	0	Operational	SM	X				
TM006	Comprehensive Integrated Transport Plan	0	600 000	750 000	600 000	600 000	Planning	SM	X		X	X	X
TM007	Annual OLS Revision	150 000	150 000	150 000	150 000	150 000	Planning	SM	X				
TM008	Feasibility Study and EIA: Western Bypass	500 000	500 000	0	0	0	Planning	WCG / SM	X			X	
TM009	Stellenbosch Southern Access Route Feasibility Study and EIA	0	0	500 000	500 000	0	Planning	WCG / SM	X			X	
TM010	Diggers	750 000	0	0	0	0	Operational	SM	X				
TM011	Jet machine	0	300 000	0	0	0	Operational	SM	X				
TM012	1 Ton Bakkies (add to existing)	0	250 000	250 000	0	0	Operational	SM	X				
TM013	Construction-Vehicle Trailer	300 000	0	0	0	0	Operational	SM	X				
TM014	Road Sweeper	0	2 600 000	0	0	0	Operational	SM	X				
TM015	Stellenbosch Traffic Model	250 000	250 000	250 000	0	0	Planning	SM					X
TM016	Parking and Loading Standards / Guideline Manual	0	0	0	150 000	0	Planning	SM	X				

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TM017	Franschhoek Transport Masterplan	0	0	400 000	0	0	Planning	SM	X			X	
TM018	Franschhoek Freight Bupass Design	0	0	100 000	0	0	Planning	SM	X				
TM019	Klapmuts Transport Masterplan	0	0	400 000	0	0	Planning	SM	X			X	
TM020	Integrated Infrastructure Management System	0	0	100 000	400 000	0	Planning	WCG / SM	X				
TM021	Freight Masterplan	0	0	300 000	300 000	0	Planning	SM	X				
TM022	Transport Demand Management	0	0	500 000	500 000	0	Planning	SM	X				X
TM023	Innovation Projects	200 000	200 000	200 000	0	0	Planning	SM	X			X	
TM024	Pound upgrade/ infrastructure	150 000	150 000	0	0	0	Operational	SM	X				
TOTAL BUDGET REQUIRED PER ANNUM		2 925 000	6 125 000	4 325 000	3 025 000	1 175 000							
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		17 575 000											
TRANSPORT INFRASTRUCTURE													
TI001	Upgrade MR27- Stellenbosch, Stellenrust Intersection	0	0	313 000	12 287 000	0	Design and Construction	WCG	X				
TI002	Upgrade Gravel Road DR1094 (Sandringham Road)	0	0	14 885 000	28 265 000	0	Design and Construction	WCG	X				
TI003	Rehab. MR168 - Capacity and Safety Improvements	5 421 000	0	0	0	0	Design and Construction	WCG	X		X		
TI004	Rehab. MR168 between MR159 and MR177- Stellenbosch	0	10 242 000	77 318 000	77 348 000	0	Design and Construction	WCG	X				
TI005	Rehab. DR1050 - Annandale Road	49 953 000	49 422 000	2 406 000	0	0	Design and Construction	WCG	X				
TI006	Safety Improvements MR27 (R44) between Stellenbosch and Somerset West	0	16 137 000	140 120 000	43 577 000	0	Design and Construction	WCG	X		X		

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TI007	Rehab. MR189 - Old Paarl Road between Bloekombos and Klein Joostenberg	36 153 000	1 363 000	0	0	0	Design and Construction	WCG	X				
TI008	Culvert Replacement on MR27 (R44) - CW / Stellenbosch	195 000	195 000	0	0	0	Design and Construction	WCG	X				
TI009	MR174 (R304) - Second Carriageway from N1 to Stellenbosch	0	0	0	70 000 000	0	Design and Construction	WCG	X				
TI010	MR172 - Rehabilitation between Helshoogte and Boschendal, including landscaping	0	0	0	40 000 000	0	Design and Construction	WCG	X				
TI011	MR166 - Rehabilitation, resealing of 1km of DR1039 and Upgrade of 1.2km of DR1043	0	0	0	19 000 000	0	Design and Construction	WCG	X				
TI012	Upgrade Gravel Roads- Mooiwater: Section 1	0	1 000 000	0	0	0	Design and Construction	SM	X				
TI013	Upgrade Gravel Roads - Mooiwater: Section 3	3 000 000	1 000 000	0	0	0	Design and Construction	SM	X				
TI014	Upgrade Gravel Roads - Lamotte & Franshoek	0	3 000 000	1 000 000	0	0	Design and Construction	SM	X				
TI015	Upgrade Gravel Roads - Wemmershoek	0	1 500 000	2 500 000	0	0	Design and Construction	SM	X				
TI016	Reconstruction of roads - WC024	3 900 000	0	0	0	0	Design and Construction	SM	X				
TI017	Reconstruction of roads - WC024	0	5 000 000	5 000 000	0	0	Design and Construction	SM	X				
TI018	Update Pavement Management System	0	0	550 000	0	0	Planning	SM	X				
TI019	Reseal Roads - Stellenbosch CBD	0	0	1 000 000	0	0	Construction	SM	X				
TI020	Reseal Roads - Franschhoek CBD	0	0	1 000 000	0	0	Construction	SM	X				
TI021	Reseal Roads - Onderpapegaai & Surrounding	2 000 000	0	1 000 000	0	0	Construction	SM	X				

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TI022	Reseal Roads - Cloetesville & Surrrounding	2 000 000	0	1 000 000	0	0	Construction	SM	X				
TI023	Reseal Roads - Idasvalley & Surrounding	1 500 000	0	1 000 000	0	0	Construction	SM	X				
TI024	Reseal Roads - Kylemore & Surrounding	1 300 000	0	1 000 000	0	0	Construction	SM	X				
TI025	Reseal Roads - Paradyskloof & Surrounding	1 500 000	0	1 000 000	0	0	Construction	SM	X				
TI026	Reseal Roads - Brandwacht & Surrounding	0	2 250 000	1 000 000	0	0	Construction	SM	X				
TI027	Reseal Roads - Groendal & Surrounding	0	2 750 000	1 000 000	0	0	Construction	SM	X				
TI028	Reseal Roads - Die Boord & Surrounding	0	2 250 000	1 000 000	0	0	Construction	SM	X				
TI029	Reseal Roads - Kayamandi & Surrounding	0	3 000 000	1 000 000	0	0	Construction	SM	X				
TI030	Reseal Roads - Klapmuts, Raithby, Meerlust, Wemmershoek, LaMotte, Maasdorp	0	0	1 000 000	0	0	Construction	SM	X				
TI031	Reseal Roads - Mostertsdrif & Surrounding	0	0	1 000 000	0	0	Construction	SM	X				
TI032	Reseal Roads - Jamestown & Technopark	0	0	1 000 000	0	0	Construction	SM	X				
TI033	Reseal Roads - Johannesdal, Pniel, Lanquedoc	0	0	1 000 000	0	0	Construction	SM	X				
TI034	Reseal Roads - Lacoline, Tennantville, Plankenburg	0	0	1 000 000	0	0	Construction	SM	X				
TI035	Upgrade Stormwater	4 000 000	0	5 000 000	0	0	Design and Construction	SM	X				
TI036	Upgrade Stormwater	0	5 000 000	0	0	0	Design and Construction	SM	X				
TI037	Stellenbosch Rivers - Rehabilitation - Planning & Design	200 000	200 000	0	0	0	Design and Construction	SM	X				

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TI038	Paradyskloof and surrounding areas Retention System	1 000 000	0	0	0	0	Design and Construction	SM	X				
TI039	River Rehabilitation	1 000 000	1 000 000	0	0	0	Design and Construction	SM	X				
TI040	Upgrading Banghoek Street	0	100 000	4 500 000	0	0	Design and Construction	SM	X				
TI041	Upgrade Gravel Roads- Jamestown	3 100 000	0	0	0	0	Design and Construction	SM	X				
TI042	Provision and Improvement of Parking Areas in Stellenbosch	0	50 000 000	50 000 000	0	0	Design and Construction	SM	X				
TI043	Upgrade Gravel Roads - Klapmuts and Dwarsrivier region	0	1 000 000	8 500 000	0	0	Design and Construction	SM	X				
TI044	Construct a Parking Garage	0	100 000	20 000 000	0	0	Design and Construction	SM	X				
TI045	Land Acquisition for Future Roads: Franschhoek	0	0	0	2 500 000	2 500 000	Planning	SM	X				
TI046	Upgrade Martinson Street	0	0	12 000 000	0	0	Design and Construction	SM	X				
TOTAL BUDGET REQUIRED PER ANNUM		116 222 000	156 509 000	360 092 000	292 977 000	2 500 000							
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		928 300 000											
SAFELY HOME													
SH001	Ad-hoc provision of streetlighting	100 000	100 000	100 000	100 000	100 000	Construction	SM	X				
SH002	Streetlighting: Kylemore entrance	750 000	0	0	0	0	Construction	SM	X				
SH003	Streetlighting: Wemmershoek / Intersection	1 000 000	1 000 000	0	0	0	Construction	MIG	X				
SH004	Energy Efficiency and Demand Side Management	10 000 000	10 000 000	0	0	0	Planning	EDSM	X			X	

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
SH005	Traffic Calming Master Plan for all built-up areas	100 000	100 000	100 000	0	0	Planning	SM	X				
SH006	Traffic Calming Master Plan: Design - WC024	0	1 000 000	0	0	0	Planning	SM	X				
SH007	Traffic Calming Projects: Implementation	375 000	1 000 000	0	0	0	Design and Construction	SM	X				
SH008	Traffic Signal Control: Upgrading of Traffic Signals	200 000	450 000	500 000	0	0	Design and Construction	SM	X				
SH009	Road Transport Safety Master Plan - WC024	250 000	250 000	250 000	0	0	Planning	SM	X		X		
SH010	Main road intersection improvements: Franschhoek	0	4 400 000	0	0	0	Design	SM	X				
SH011	Main road intersection improvements: Franschhoek - Design	0	50 000	0	0	0	Design	SM	X				
SH012	Main road intersection improvements: R44 / Bird Street	2 400 000	0	0	0	0	Design and Construction	SM	X				
SH013	Main road intersection improvements:: R44 / Dorp Street	0	0	1 500 000	0	0	Design and Construction	SM	X				
SH014	Main road intersection improvements: Strand / Adam Tas / Alexander	7 500 000	2 600 000	0	0	0	Design and Construction	SM	X				
SH015	Main road intersection improvements: R44 / Merriman Street	350 000	0	0	0	0	Design and Construction	SM	X				
SH016	Main road intersection improvements: R44 / Helshoogte	3 600 000	0	0	0	0	Design and Construction	SM	X				
SH017	Main road intersection improvements: R44 / Helshoogte / Lelie Street	1 000 000	0	0	0	0	Design and Construction	SM	X				
SH018	Main road intersection improvements: R44 / Molteno Street	300 000	0	0	0	0	Design and Construction	SM	X				
SH019	Main road intersection improvements:Pniel / Kylemore	200 000	2 000 000	2 000 000	0	0	Design and Construction	SM	X				

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
SH020	Main road intersection improvements: R44 / Blaauklippen Road Intersection	0	0	0	860 000	0	Design and Construction	SM	X				
SH021	Main road intersection improvements: R44 / Dennesig Intersection	0	0	0	180 000	0	Design and Construction	SM	X				
SH022	Main road intersection improvements: R44 / Paul Kruger Street Intersection	0	0	0	240 000	0	Design and Construction	SM	X				
SH023	Main road intersection improvements: Helshoogte Road / La Colline Road Intersection	0	0	0	3 150 000	3 150 000	Design and Construction	SM	X				
SH024	Main road intersection improvements: Helshoogte Road / Cluver Road / Rustenburg and Rustenburg Road / Sonnebloem Street Intersection	0	0	0	2 200 000	0	Design and Construction	SM	X				
SH025	Asset Management - Update Roads Signs Management System	200 000	0	0	0	0	Planning	SM	X				
SH026	Asset Management - Implement Traffic Calming Management System	0	200 000	0	0	0	Planning	SM	X				
SH027	Traffic Management Improvement Programme	2 000 000	500 000	1 000 000	0	0	Design and Construction	SM	X				
SH028	Merriman & Bosman Signilasation	1 000 000	0	0	0	0	Design and Construction	SM	X				
SH029	Intersection Upgrade Banhoek & Rhyneveld	1 000 000	0	0	0	0	Design and Construction	SM	X				
SH030	Khayamandi Pedestrian Crossing (R304, river and railway line)	200 000	1 000 000	0	0	0	Design and Construction	SM	X				
SH031	Road Safety Improvements	250 000	250 000	250 000	250 000	250 000	Design and Construction	SM	X		X		
SH032	Road Safety Audits and Security Interventions	0	0	0	500 000	500 000	Planning	SM	X		X		
TOTAL BUDGET REQUIRED PER ANNUM		32 775 000	24 900 000	5 700 000	7 480 000	4 000 000							

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		74 855 000											
PUBLIC TRANSPORT													
PT001	Taxi Rank - Kayamandi	500 000	500 000	0	0	0	Design and Construction	SM	X				
PT002	Taxi Rank - Franschhoek	500 000	2 000 000	0	0	0	Design and Construction	SM	X				
PT003	Klapmuts Public Transport Interchange	2 750 000	2 890 000	0	0	0	Design and Construction	MIG	X				
PT004	Klapmuts Public Transport Interchange	2 790 000	0	0	0	0	Design and Construction	MIG	X				
PT005	Bus and taxi shelters	1 100 000	1 000 000	1 100 000	0	0	Design and Construction	SM	X				
PT006	Add bays to Bergzicht Taxi Rank and holding area	1 000 000	0	0	0	0	Design and Construction	SM	X				
PT007	Bus shelters	100 000	100 000	0	0	0	Design and Construction	SM	X				
PT008	Transport Law Enforcement Strategy	0	0	400 000	0	0	Planning	SM	X				
PT009	Transit Oriented Develppment - Concept and Station Relocation Study	1 500 000	0	200 000	0	0	Planning	PRSA / SM	X				
PT010	Corporate Jet Hub Feasibility Study at Stellenbosch Airport	0	0	250 000	750 000	0	Planning	SM	X				
PT011	Tour Bus Parking Facility Feasibility Study	0	0	250 000	0	0	Planning	SM	X				
PT012	Park and Ride Feasibility Study for Stellenbosch and Cape Town Int.Airports	0	0	200 000	0	0	Planning	SM	X				
PT013	PTSN: Operational and Business Plans	2 500 000	2 500 000	0	0	0	Planning	PTNG / SM	X				
PT014	PTSN: Transformationand Empowerment Process	5 000 000	5 000 000	5 000 000	5 000 000	5 000 000	Planning	PTNG	X	X			

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
PT015	PTSN: Compensation of Operators	0	0	0	2 160 000	2 160 000	Planning	PTNG	X				
PT016	PTSN: Detailed Design and Tender	5 000 000	5 000 000	5 000 000	8 500 000	2 000 000	Planning	PTNG	X				
PT017	PTSN: Procurement of Vehicles	0	0	0	10 000 000	0	Operation	PTNG	X				
PT018	PTSN: Route Stops and Shelters	0	0	6 250 000	0	0	Design and Construction	PTNG	X				
PT019	PTSN: Central Terminal	0	0	15 000 000	15 000 000	0	Design and Construction	PTNG	X				
PT020	PTSN: Temporary Depot	0	0	25 000 000	25 000 000	0	Design and Construction	PTNG	X				
PT021	PTSN: Ticketing System	0	0	0	20 000 000	0	Design and Construction	PTNG	X				
PT022	PTSN: Control Cente	0	0	10 000 000	10 000 000	0	Design and Construction	PTNG	X				
PT023	PTSN: Road and Intersection Upgrading	0	0	25 000 000	25 000 000	0	Design and Construction	PTNG	X				
PT024	PTSN: ITS	0	0	5 000 000	15 000 000	0	Design and Construction	PTNG	X				
PT025	PTSN: Management Entity Establishment Costs	0	0	5 000 000	11 250 000	0	Planning	PTNG	X				
TOTAL BUDGET REQUIRED PER ANNUM		22 740 000	18 990 000	103 650 000	147 660 000	9 160 000							
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		302 200 000											
TOURISM													
TOU001	Directional Information Signage	50 000	50 000	50 000	50 000	50 000	Construction	SM	X				
TOTAL BUDGET REQUIRED PER ANNUM		50 000	50 000	50 000	50 000	50 000							
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		250 000											

No.	Projects	Cash Flow					Type (Planning / Design / Construction / Operation)	Funding Source	Strategic Goals				
		2016/2017	2017/2018	2018/2019	2019/2020	2020/2021		WCG: Western Cape Government, SLM: Stellenbosch Local Municipality	Strategic Goal 1: Create opportunities for growth and jobs	Strategic Goal 2: Improve education outcomes and opportunities	Strategic Goal 3: Increase wellness, safety and tackle social ills	Strategic Goal 4: Enable a resilient, sustainable. quality and inclusive living environment	Strtegic Goal 5: Embed good governance and integrated service delivery through partnerships and spatial alignment
NMT AND SUSTAINABLE TRANSPORT													
NMT001	Bicycle Lockup Facilities	100 000	100 000	0	0	0	Design and Construction	SM	X				
NMT002	Pedestrian and Cycle paths	1 000 000	1 000 000	1 000 000	0	0	Design and Construction	SM	X				
NMT003	Pedestrianise Church and Andringa Streets	0	350 000	0	0	0	Design and Construction	SM	X				
NMT004	Detailed Cycle Plan & Implementation	0	10 000 000	10 000 000	0	0	Planning	MIG / SM	X				
NMT006	NMT Facilities:Franschhoek	0	0	0	4 500 000	4 500 000	Design and Construction	SM	X				
NMT007	Pedestrianisation of De Beer Street and Woonerf on US Campus	0	0	1 000 000	1 000 000	0	Design and Construction	US / SM	X				
TOTAL BUDGET REQUIRED PER ANNUM		1 100 000	11 450 000	12 000 000	5 500 000	4 500 000							
TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		34 550 000											
GRAND TOTAL BUDGET REQUIRED PER ANNUM		175 812 000	218 024 000	485 817 000	456 692 000	21 385 000							
GRAND TOTAL BUDGET REQUIRED PER ANNUM FOR NEXT FIVE YEARS		1 357 730 000											

13. STAKEHOLDER CONSULTATION

SYNOPSIS:

- Stakeholder consultation was conducted by means of:
  - A survey questionnaire
  - A public meeting held in Stellenbosch
- The priority issues from the survey questionnaire and the public meeting were:
  - The lack of a regular and reliable public bus service in Stellenbosch and to surrounding areas is the highest priority and the main focus in the next five years.
  - The second priority is the need to build new roads to provide alternative routes and relieve congestion in and around Stellenbosch.
  - The creation of more parking in the Stellenbosch CBD.
  - The improvement of cycling and pedestrian routes and safety in Stellenbosch

An objective of this CITP is to strive for good governance and compliance and to measure user satisfaction at the beginning and end of the CITP timeframe. In compliance with the requirements of the Department of Transport, consultation and participation of interested and affected parties was invited as part of the preparation of the CITP. The participation process was carried out in parallel with the public consultation process for the preparation of the Integrated Development Plan for the Stellenbosch Municipality, involving the internal municipal IDP team as well as a specialist service provider.

The following approach was used to provide opportunities for the public to participate and to register their remarks, needs and requirements. These were as follows:

- A transport survey, in the form of a questionnaire (translated into English, Afrikaans and Xhosa), was disseminated throughout the municipal area through Ward Committees, general distribution in municipal buildings, newspapers and on a web-based interface for a four week period.
- A public meeting was held in Stellenbosch to obtain input from interested and affected parties.

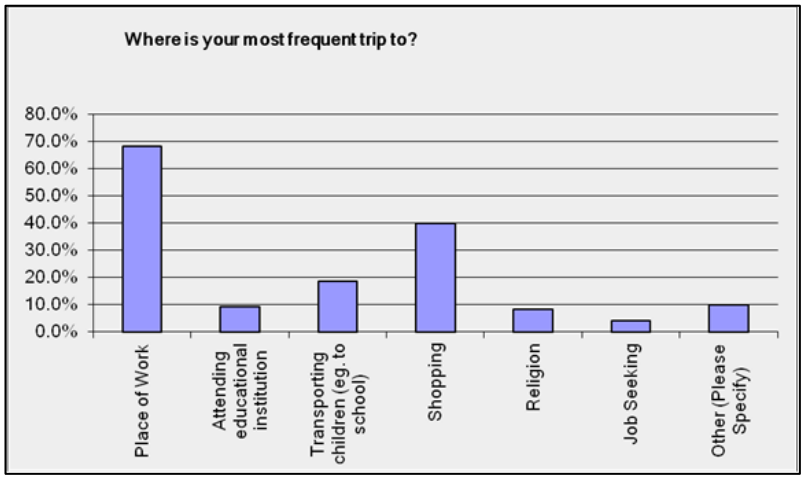
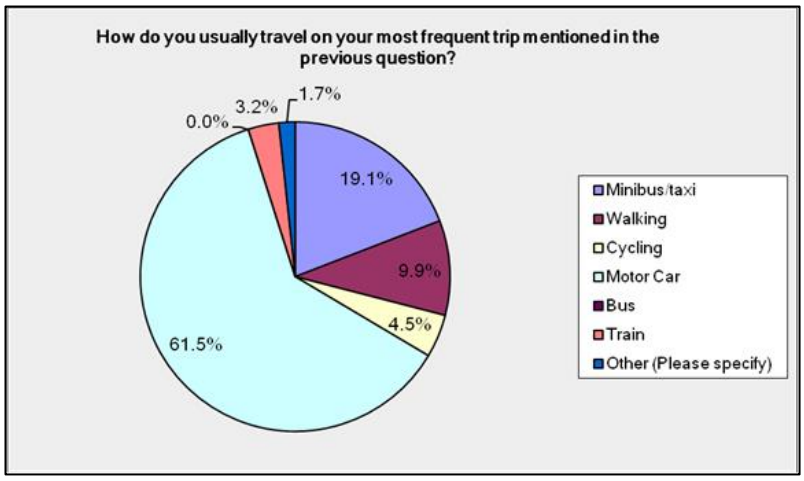
A supplementary report on the outcome of the stakeholder consultation has been prepared and is available. The outcome of the process and the transport related needs are summarized below.

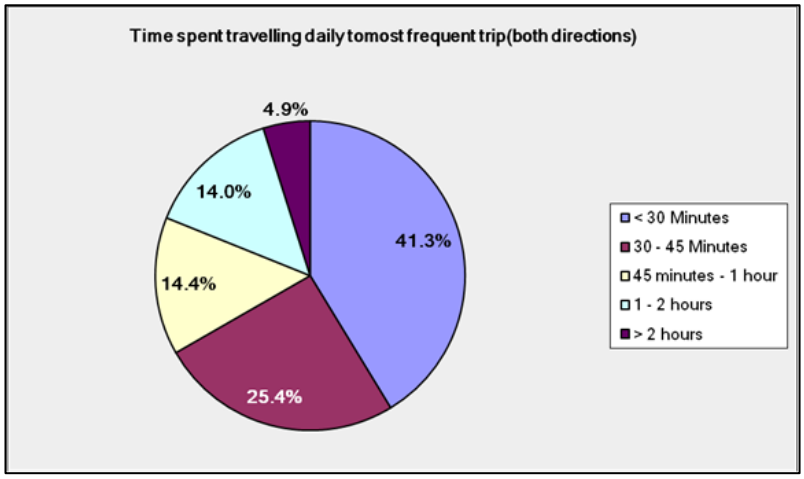
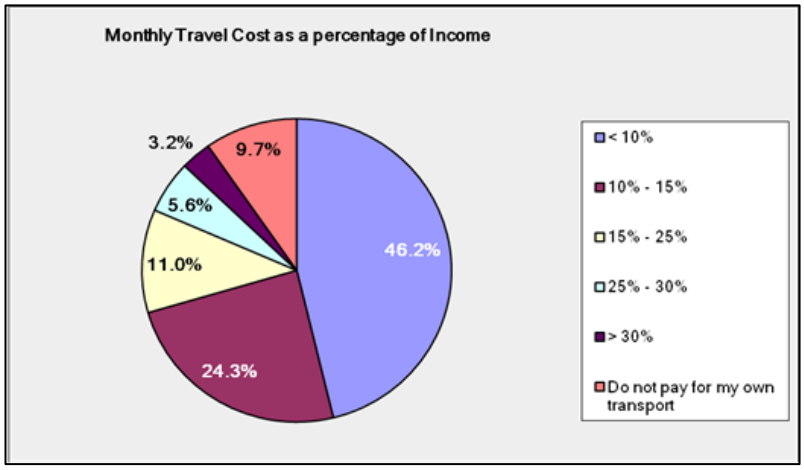
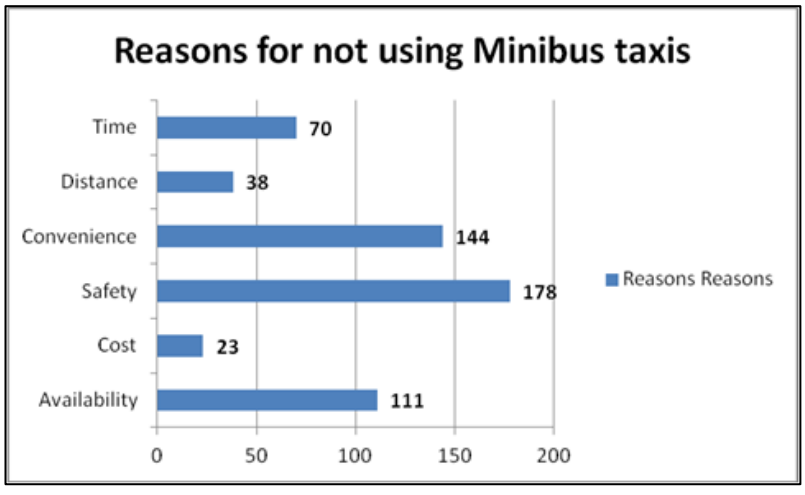
13.1 Results from Transport Survey

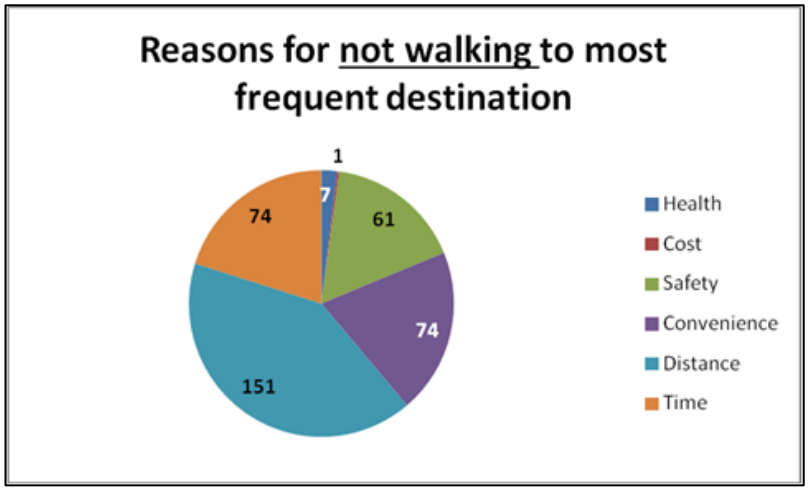
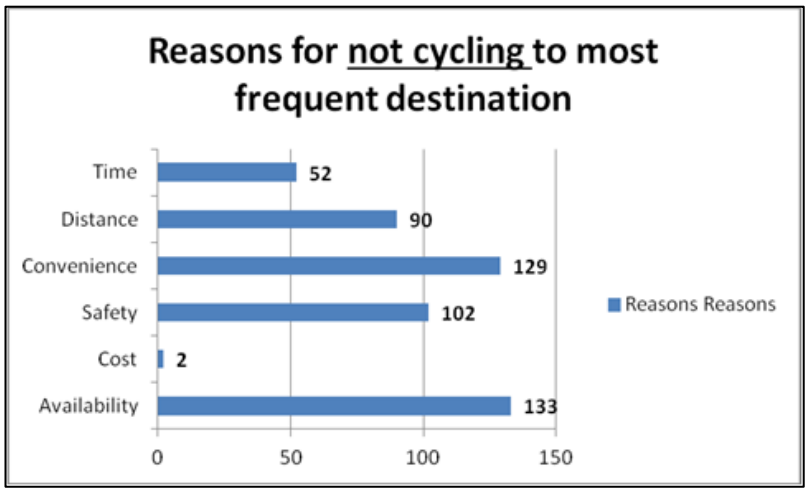
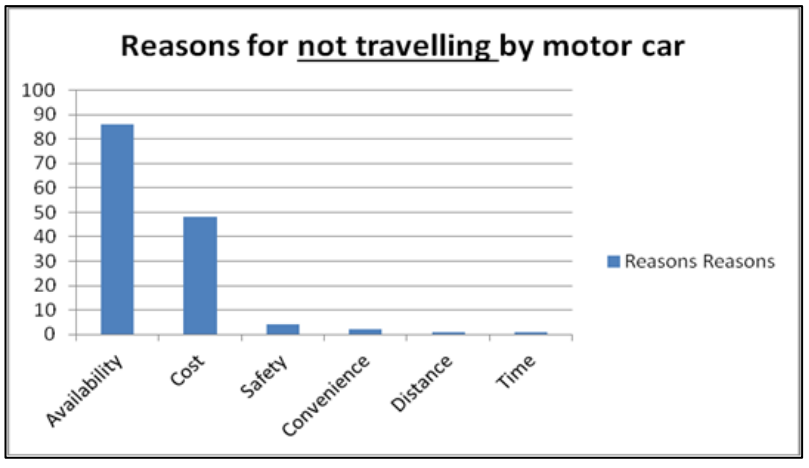
A total of 512 responses to the survey questionnaire were received which were analysed and summarised. A good spread of responses was received from all Wards in the Stellenbosch municipal area.

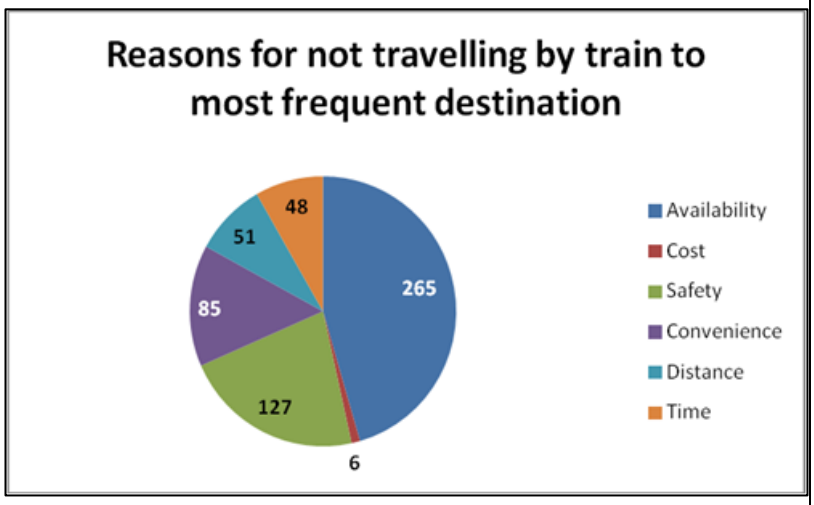
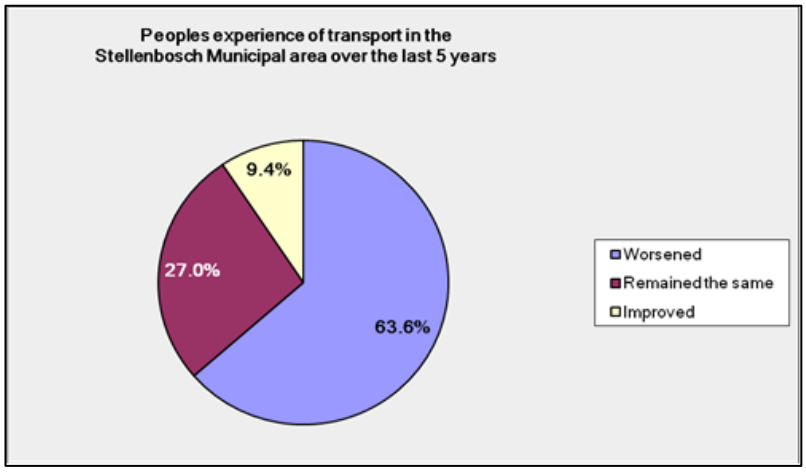
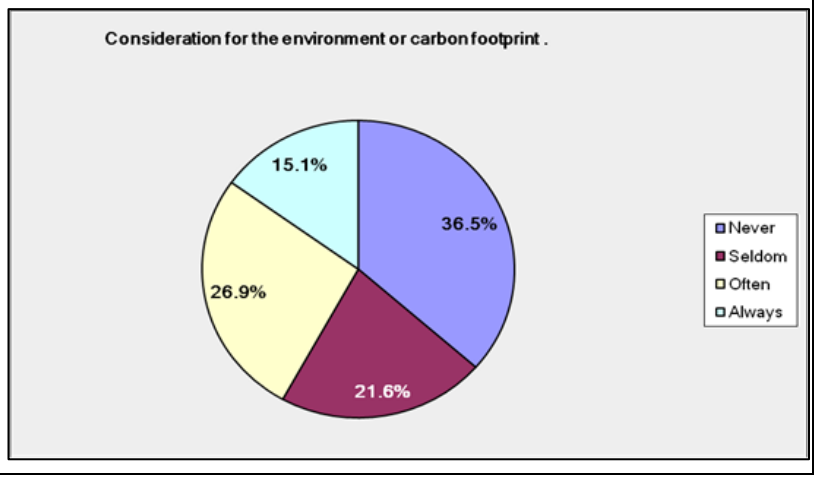
Table 13-1 indicates a summary of the responses:

Table 13-1: Summary of Responses from Transport Survey

No.	Issue	Response
1.	Most frequent trip destination	
2.	Most frequent mode of transport to most frequent trip destination	

No.	Issue	Response
3.	Time spent travelling on most frequent trip (Both directions)	
4.	Time of day travelled	The majority (80,9%) of respondents travel during peak morning and evening hours.
5.	Car Ownership	63,4% of respondents owned a motor car.
6.	Total monthly-spend on travel as % of income	
7.	Reasons for not using Minibus Taxis	

No.	Issue	Response
8.	Reasons for not walking	
9.	Reasons for not cycling	
10.	Reasons for not using a car	

No.	Issue	Response
11.	Reasons for not travelling by train	
12.	Perception of transport experience over the last 5 years	
13.	Individual consideration of the environment and carbon footprint when travelling	

Source: Report on the outcome of public participation processes relating to the transport planning of the CITP (SAKAZA Communications (Pty) Ltd)

Table 13-2 indicates the responses top the question of “what transport related issues should be the main focus of the Municipality” in next five years”:

Table 13-2: Main Focus of the Municipality in next 5 Years

Priority	Item	Percentage
	Expand facilities (e.g. ranks, embayments, shelters) for minibus taxis	25.3%
	Support minibus taxis to expand the services offered	22.6%
1	Implement a local scheduled public transport service (e.g. bus service)	52.5%
	Improve rail services from neighbouring municipalities	23.5%
2	Build new roads to provide alternative routes and relieve congestion	45.7%
3	Create more parking in the Stellenbosch CBD	39.8%
	Build more cycling and walking routes	31.6%
	Improve lighting and security on cycling and walking routes	28.1%
	Improve security on existing public transport (minibus taxis and trains)	26.4%
	Improve freight facilities	4.4%

Source: Report on the outcome of public participation processes relating to the transport planning of the CITP (SAKAZA Communications (Pty) Ltd)

The lack of a regular and reliable public bus service in Stellenbosch and to surrounding areas is the highest priority amongst the majority of the respondents to the survey and most (52,5%) see this as the major priority that the Stellenbosch Municipality should focus on in the next five years.

The second biggest issue is the need to build new roads to provide alternative routes and relieve congestion in and around Stellenbosch. This is seen as a way to address the next most important issue which is the creation of more parking in the Stellenbosch CBD.

Issues related to improving cycling and pedestrian routes and safety in Stellenbosch were considered more important than those related to the minibus taxi service in the area.

13.2 Results from Public Meeting

Three focus groups were constituted in the public meeting: These were:

- Group1: municipal officials, councilors and members of the consulting team
- Group 2: members of the local academic community and specialists
- Group 3: members of the local business and resident communities.

The groups were asked to rate each issue in terms of “importance” and “satisfaction” as indicated in the following tables:

Table 13-3: Issues raised in Focus Group 1

No.	Item	Rating of Importance (Total/10)	Level of Satisfaction
1	Insufficient Parking	10,6	3,7
2	Provision for the disabled in the Road Network	9,6	4,7
3	Provincial Roads vs. Local Government Roads	10,6	3,4
4	Congestion on the R44 and the R304	Most Important 11	Least 1,7
5	The increase of cyclists and pedestrians on the R44	7,6	3,1
6	Street Lighting	9,4	4,0
7	Children's Pedestrian Crossings	Most Important 11	1,6
8	Non-motorised Transport Routes	9.3	4,9

Source: Report on the outcome of public participation processes relating to the transport planning of the CITP (SAKAZA Communications (Pty) Ltd)

Table 13-4: Issues raised in Focus Group 2

No.	Item	Rating of Importance (Total/10)	Level of Satisfaction
1	Congestion/ access roads to Stellenbosch	10,5	1,66
2	Planning	10,85	1,7
3	Poor leadership	10,5	1,66
4	Money shortage	8,25	5
5	Non- Motorised Transport	10,8	1,83
6	Funding of plans	11	1,6
7	Parking/tourist buses	11	1,33
8	Limited public transport	10,83	1,83
9	Oversight problem between Municipality and Province	10,66	1,83
10	Infrastructure/development execution	10,6	2
11	De-centralisation at the outside town	7,38	6,6
12	Protection of Heritage areas/pedestrian zones	10,3	3,6
13	Heavy transport blocking/ Loading zones	10,6	2

Source: Report on the outcome of public participation processes relating to the transport planning of the CITP (SAKAZA Communications (Pty) Ltd)

Table 13-5: Issues raised in Focus Group 3

No.	Item	Rating of Importance (Total/10)	Level of Satisfaction
1	Transport	10,85	3,43
2	No Equality with Regards to Transport	10,6	3,17
3	Integration/Spatial Planning	10,71	3,57
4	Parking	10,14	3,85
5	Innovation in Stellenbosch Municipality	8,57	5,71
6	Safety	9,7	6,0
7	Bicycle Paths (Existing)	4,28	5,14
8	What does the future look like?	9,3	5,1

Source: Report on the outcome of public participation processes relating to the transport planning of the CITP (SAKAZA Communications (Pty) Ltd)

Issues common to all three groups include:

- Land use and transport planning
- Parking and
- The need for a public transport service

The conclusions for the public meeting are that the lack of a regular and reliable public bus service in Stellenbosch and to surrounding towns and areas is the highest priority amongst the majority of the respondents. By addressing this, the Municipality will contribute positively to addressing the two other major concerns of residents, namely need to build new roads to provide alternative routes to relieve congestion and create more parking in the Stellenbosch CBD.

ANNEXURE A: EXISTING OPERATING LICENCE ROUTES

Figure 13-1: Routes Stellenbosch - Belville

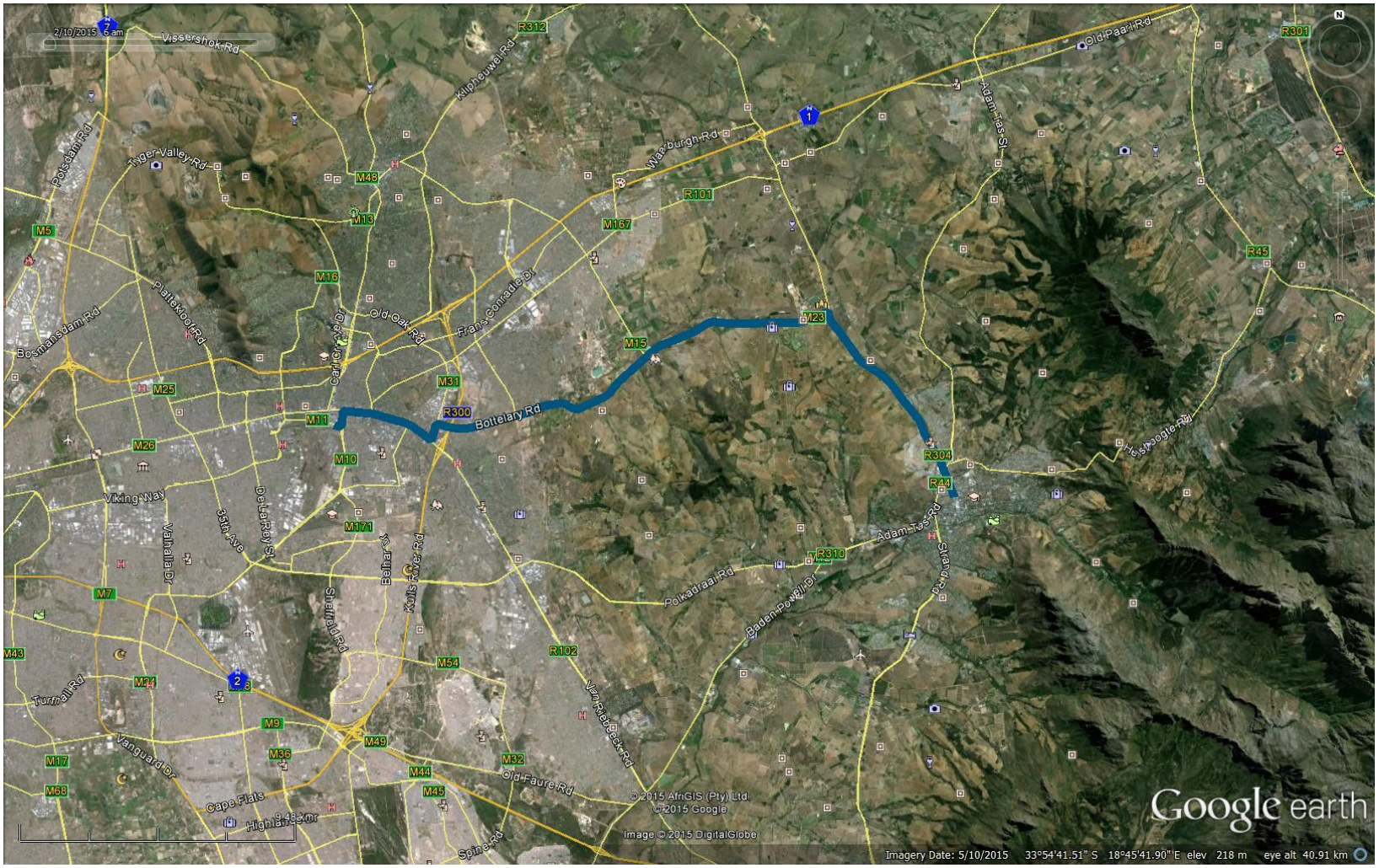


Figure 13-2: Routes Stellenbosch - Cloetesville

Figure 13-3: Routes Stellenbosch – Devon Valley

Figure 13-4: Routes Stellenbosch – Elsenberg

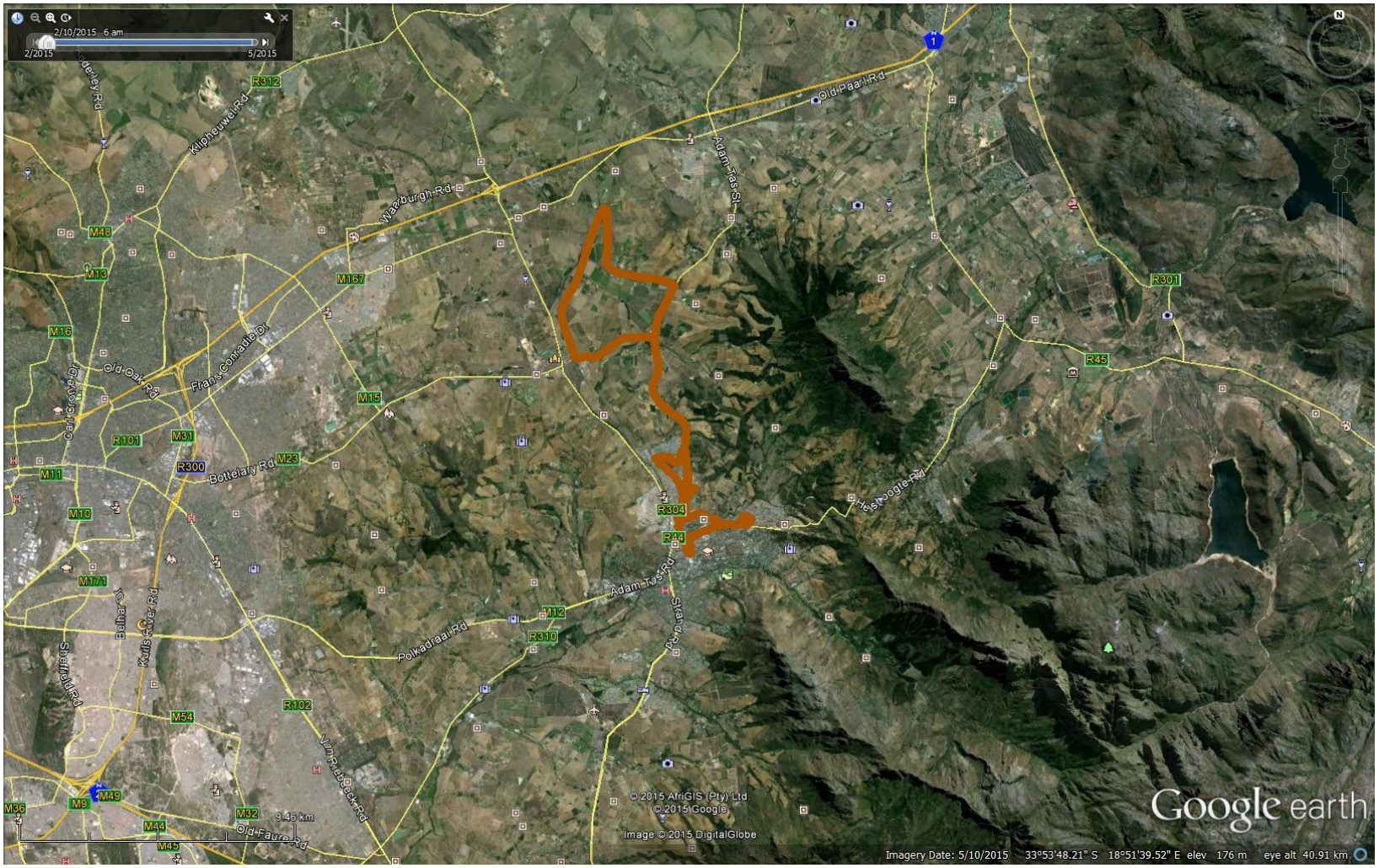


Figure 13-5: Routes Stellenbosch – Idas Valley

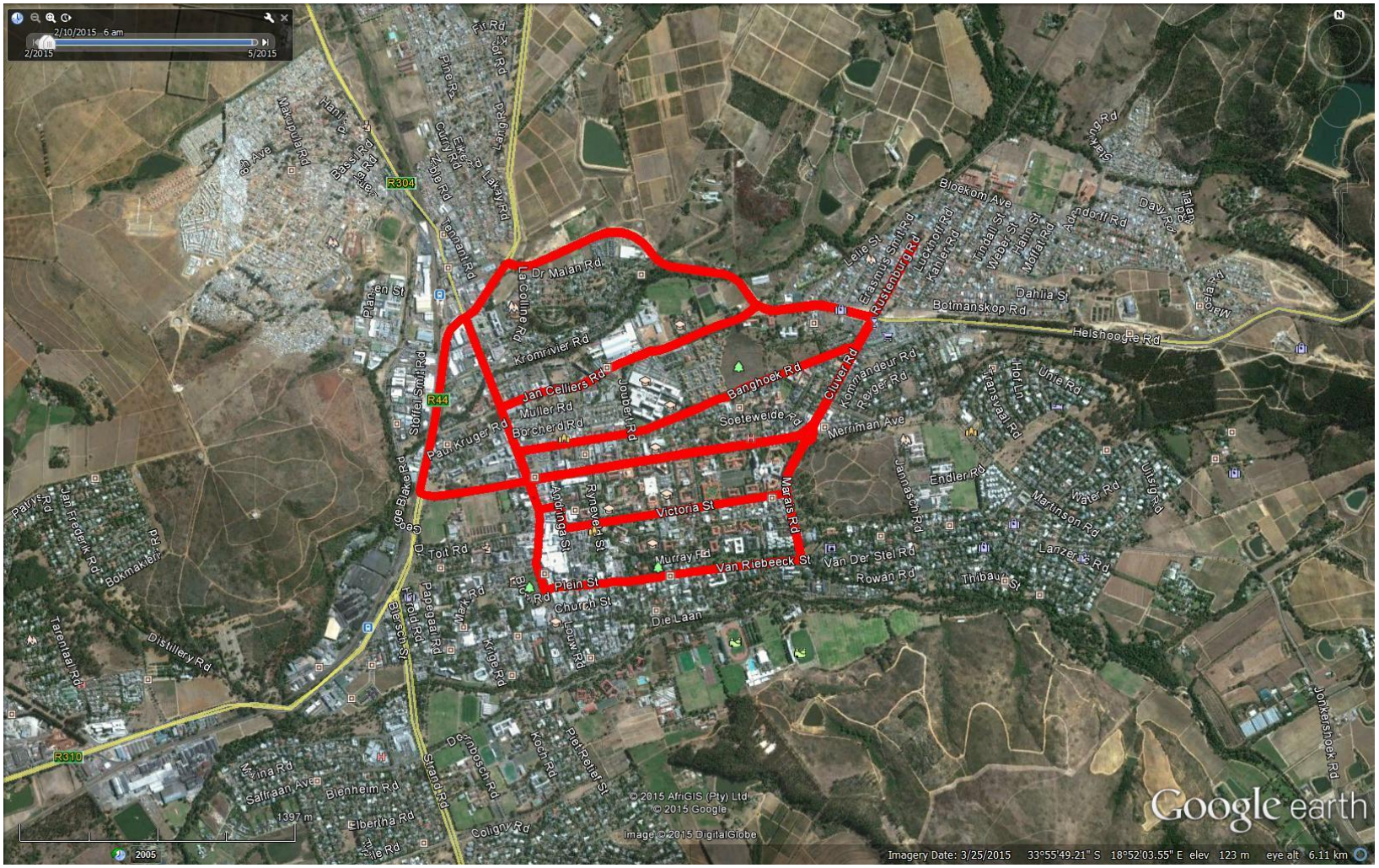


Figure 13-6: Routes Stellenbosch – James Town

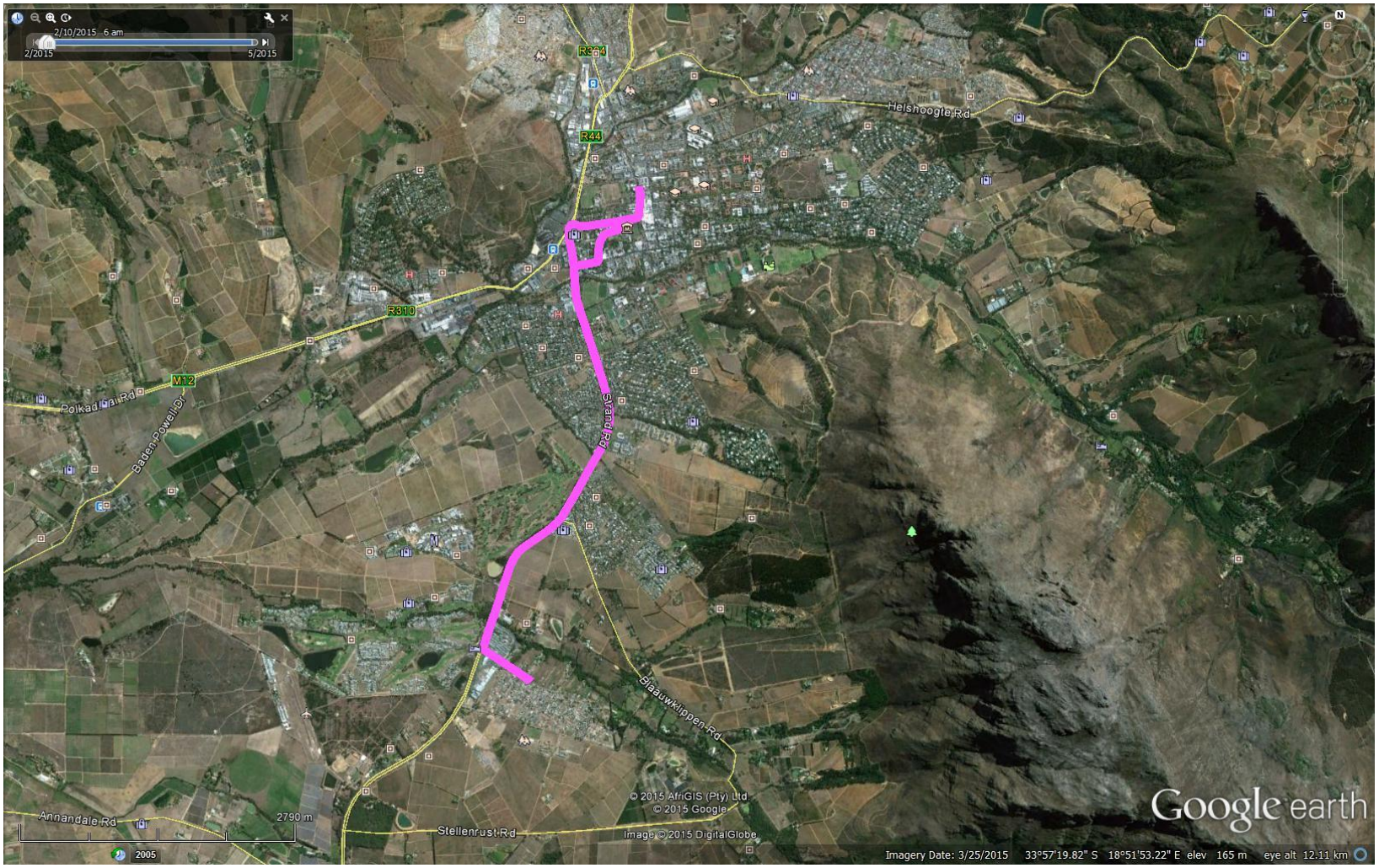


Figure 13-7: Routes Stellenbosch – Jonkers Hoek

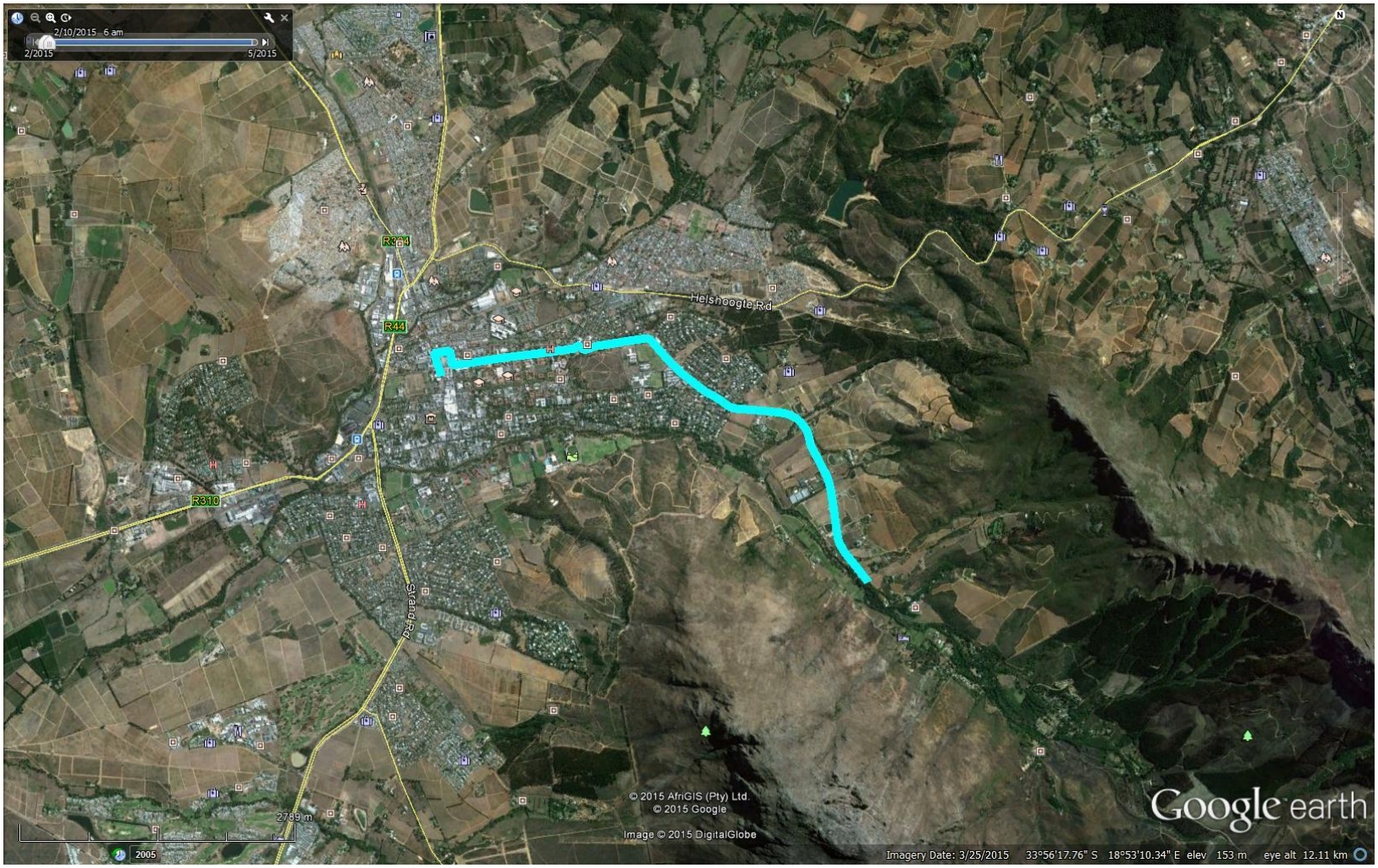


Figure 13-8: Routes Stellenbosch – Kayamandi

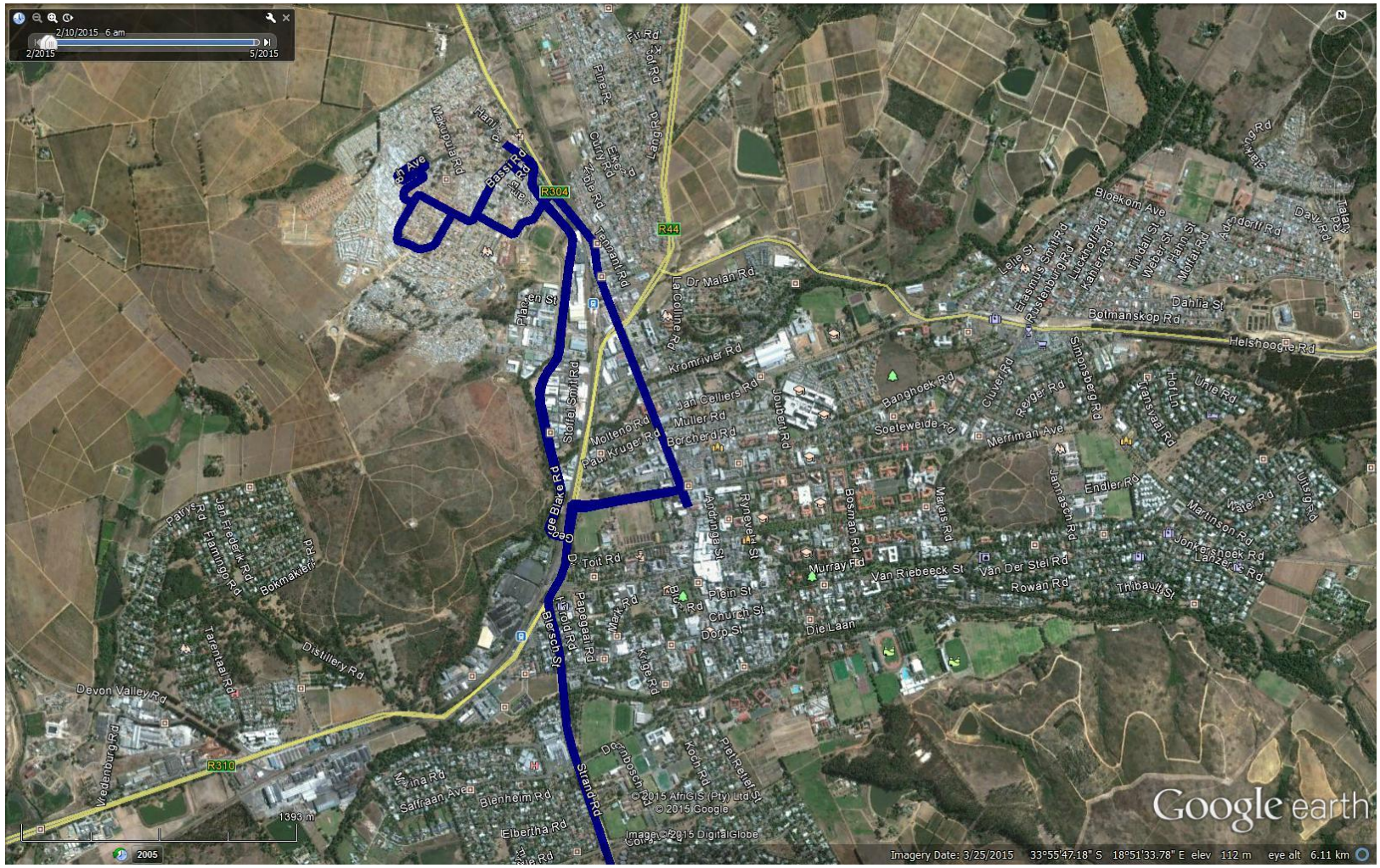


Figure 13-9: Routes Kayamandi – Somerset West

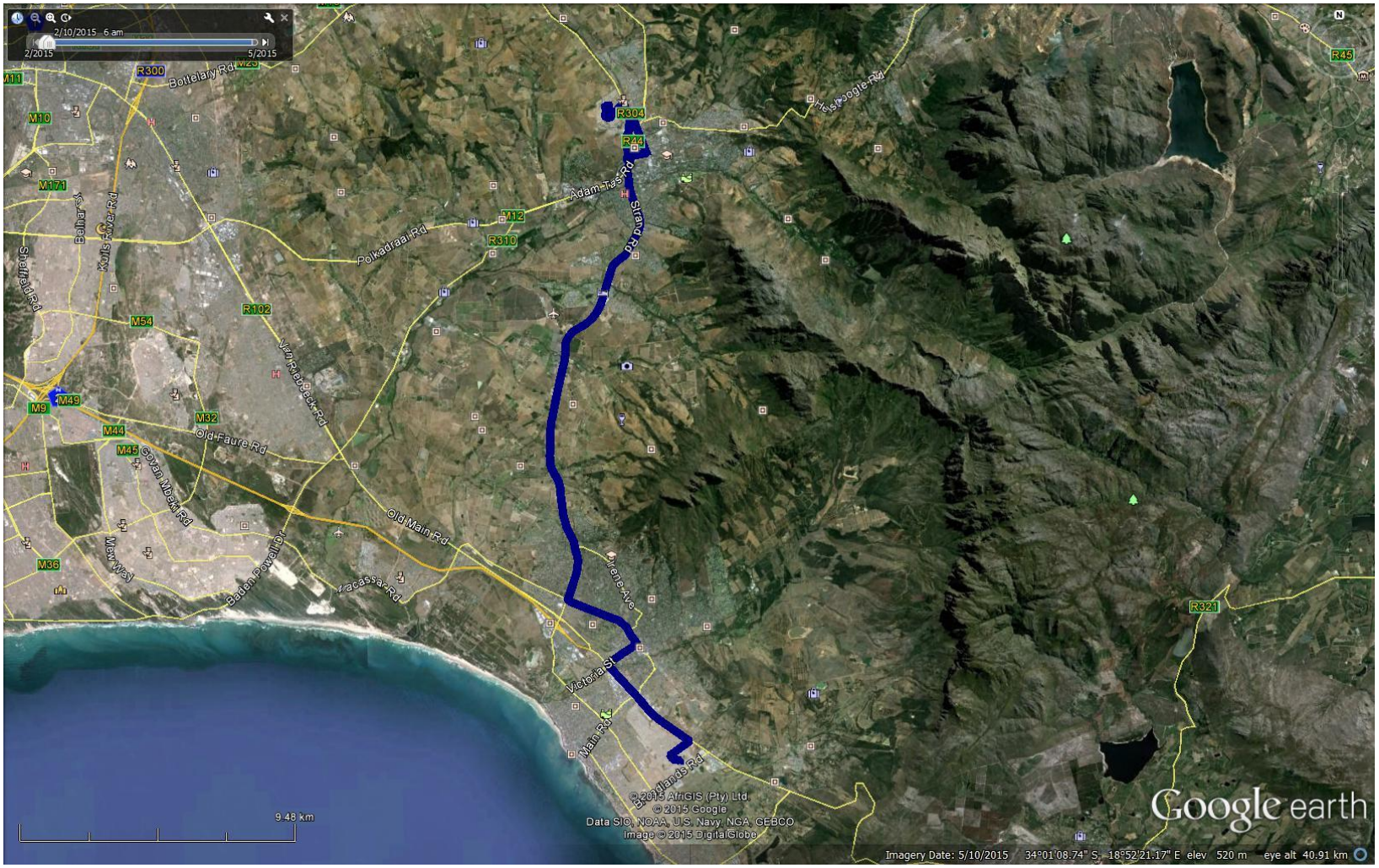


Figure 13-10: Routes Stellenbosch – Klapmuts

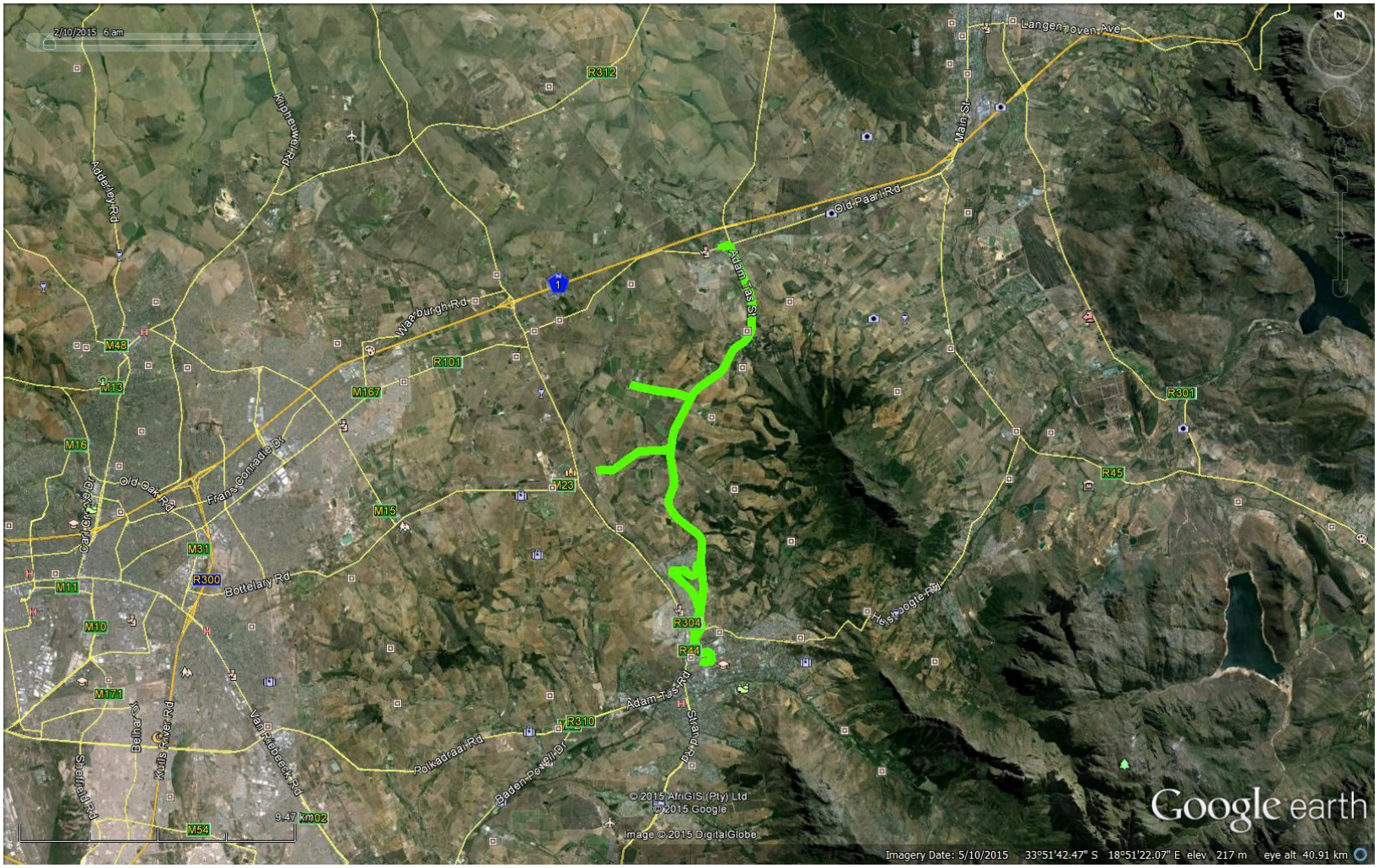


Figure 13-11: Routes Stellenbosch – Koelenhof

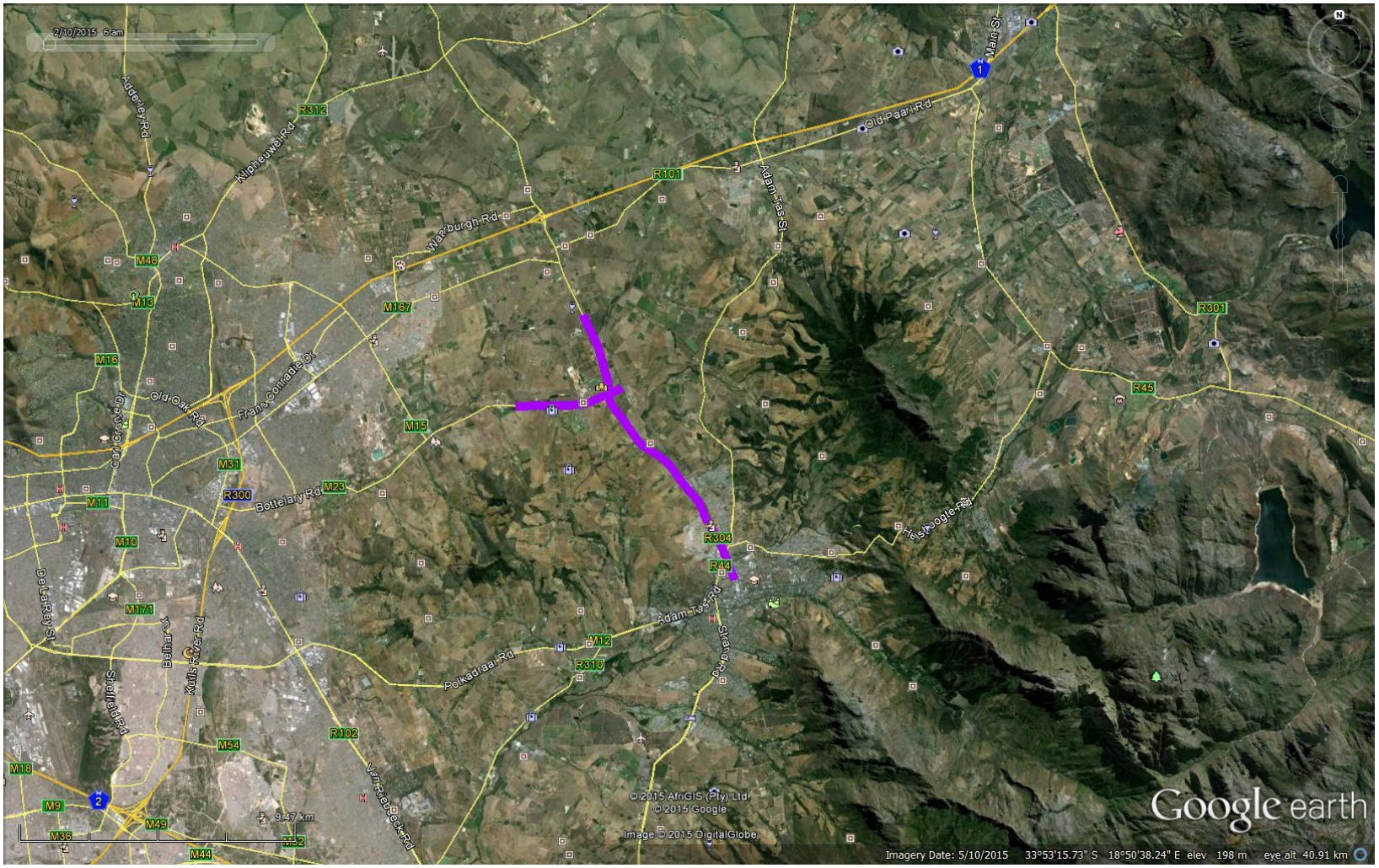


Figure 13-12: Routes Stellenbosch – Kuilsrivier

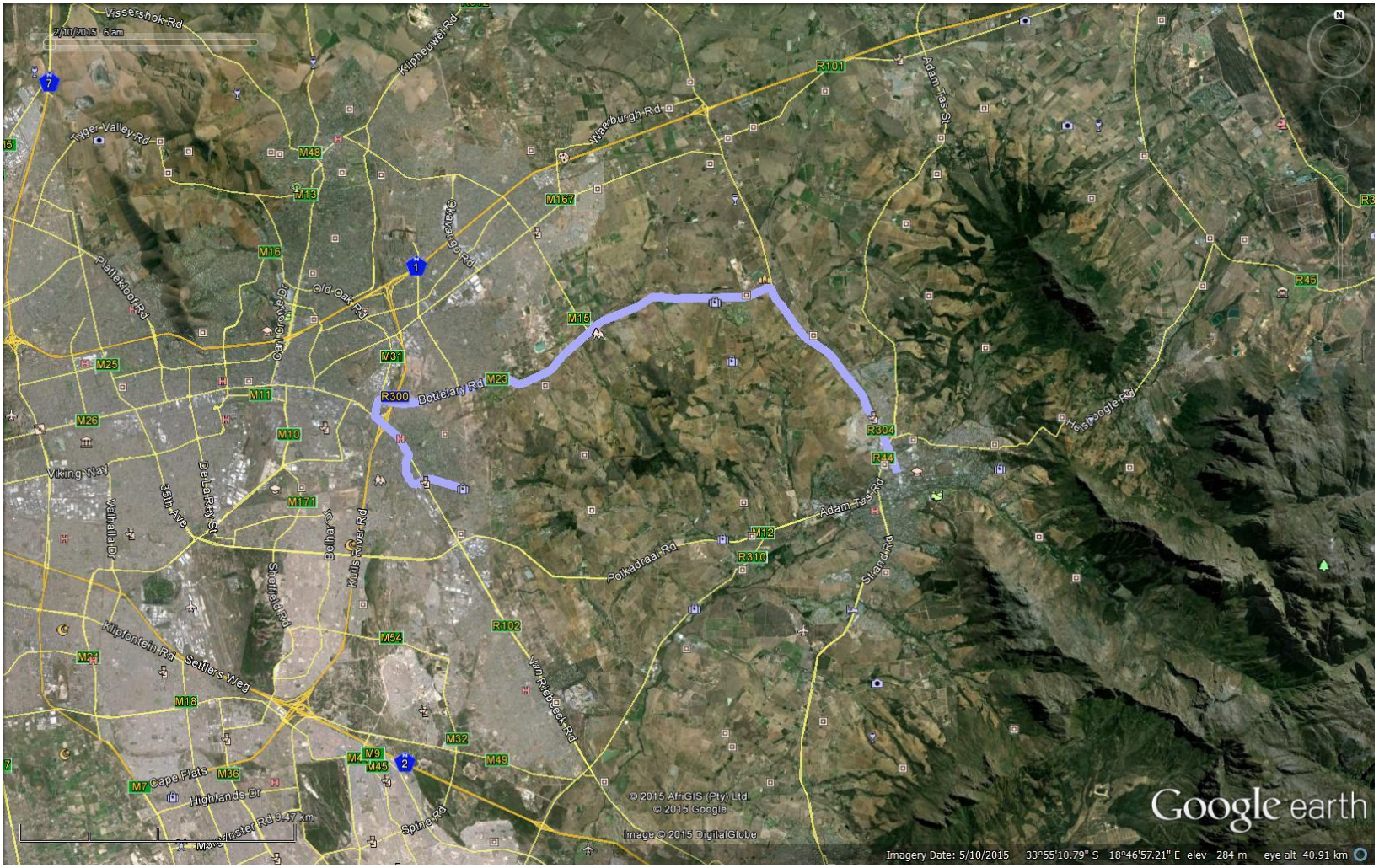


Figure 13-13: Routes Stellenbosch – Kylemore

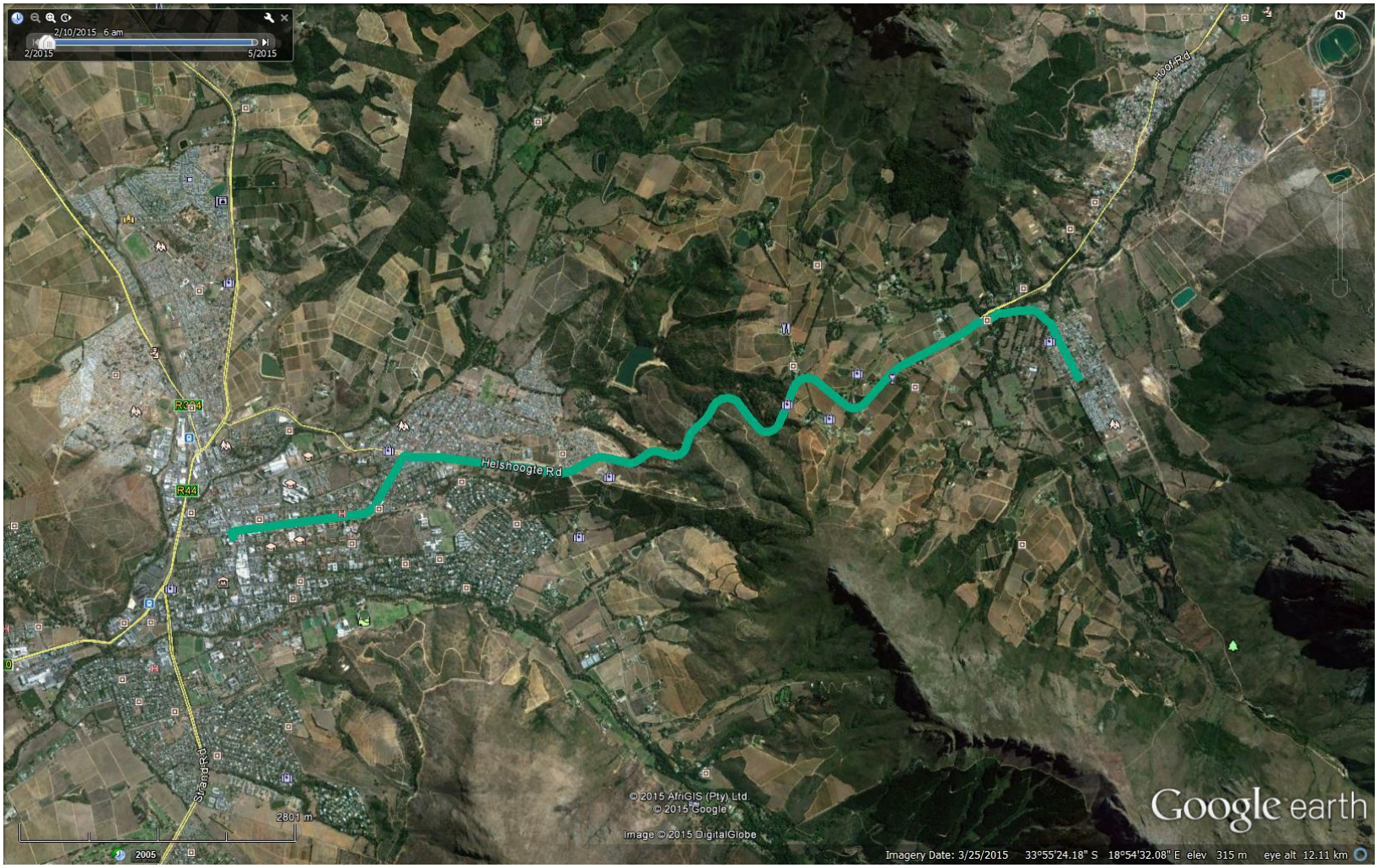


Figure 13-14: Routes Stellenbosch – Lynedoch

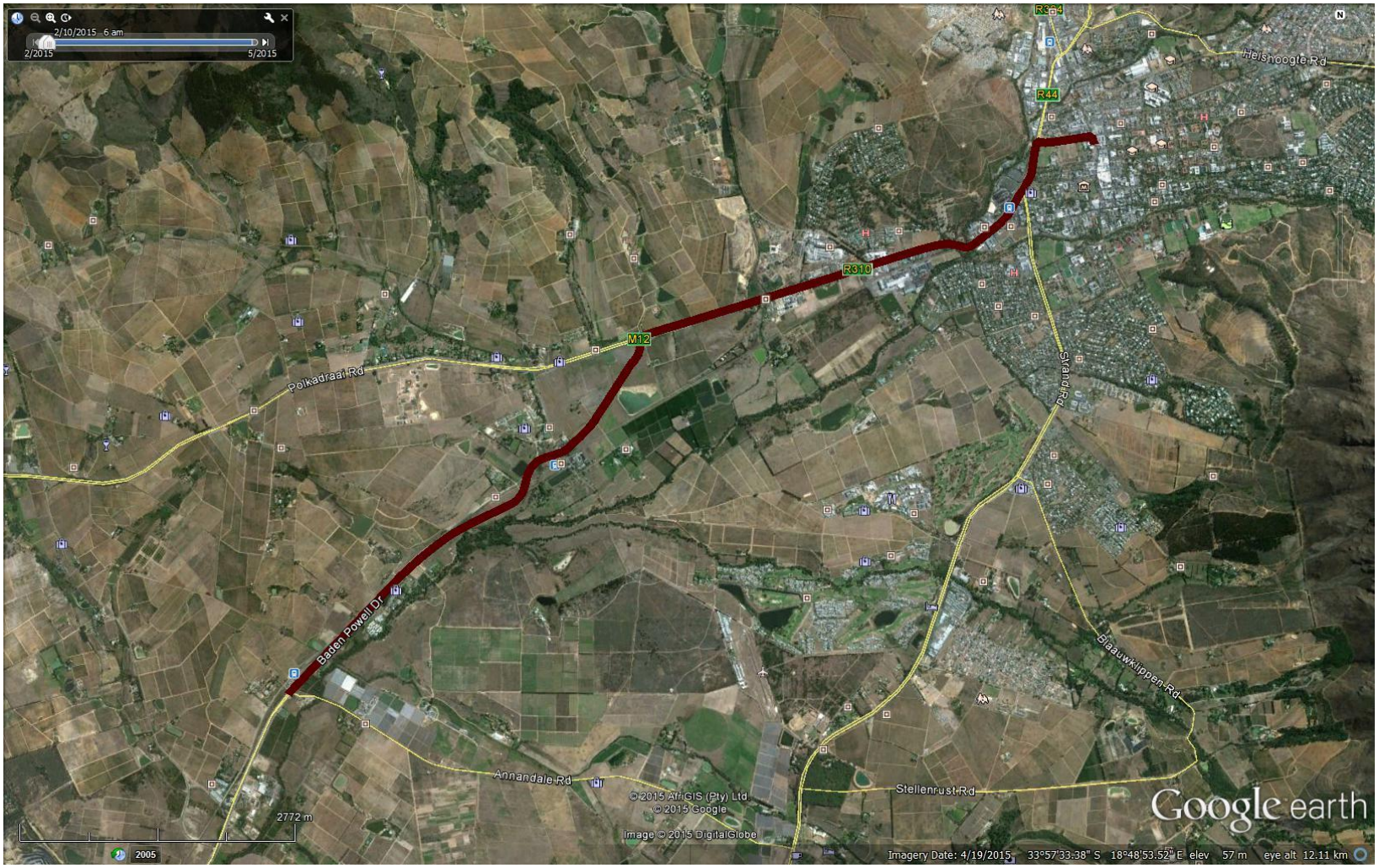


Figure 13-15: Routes Stellenbosch – Paarl

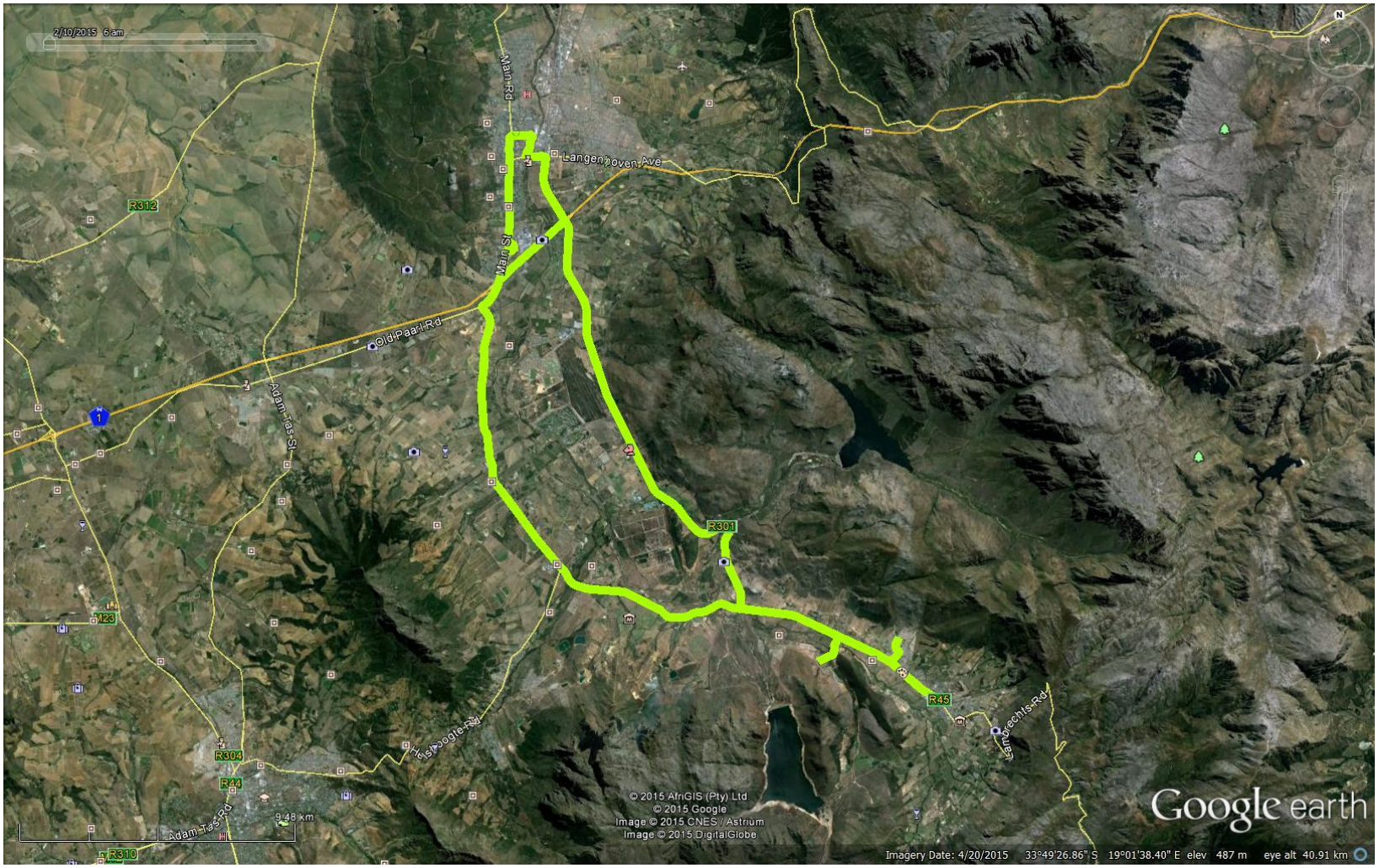


Figure 13-16: Routes Stellenbosch – Paarl

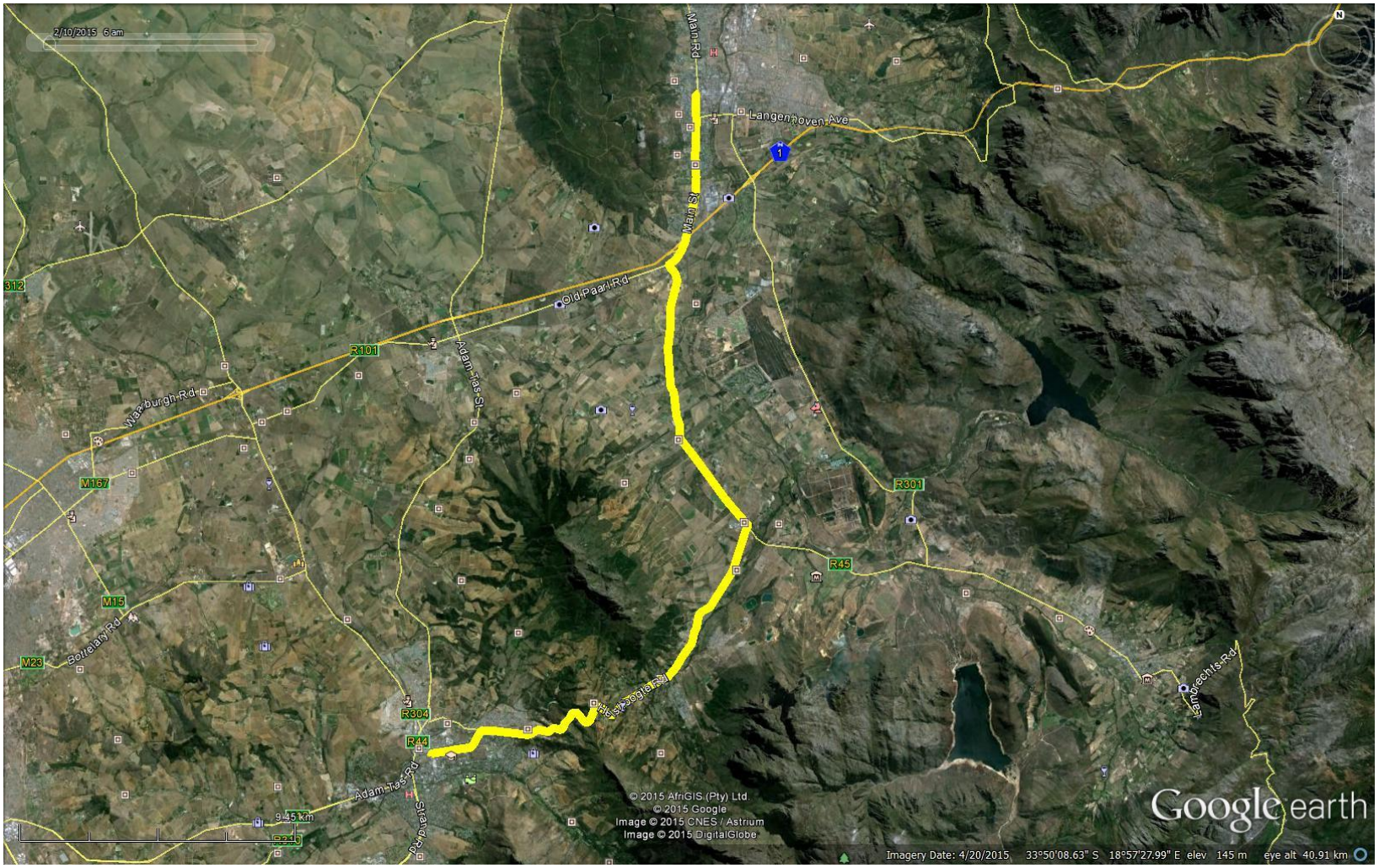


Figure 13-17: Routes Stellenbosch – Somerset West

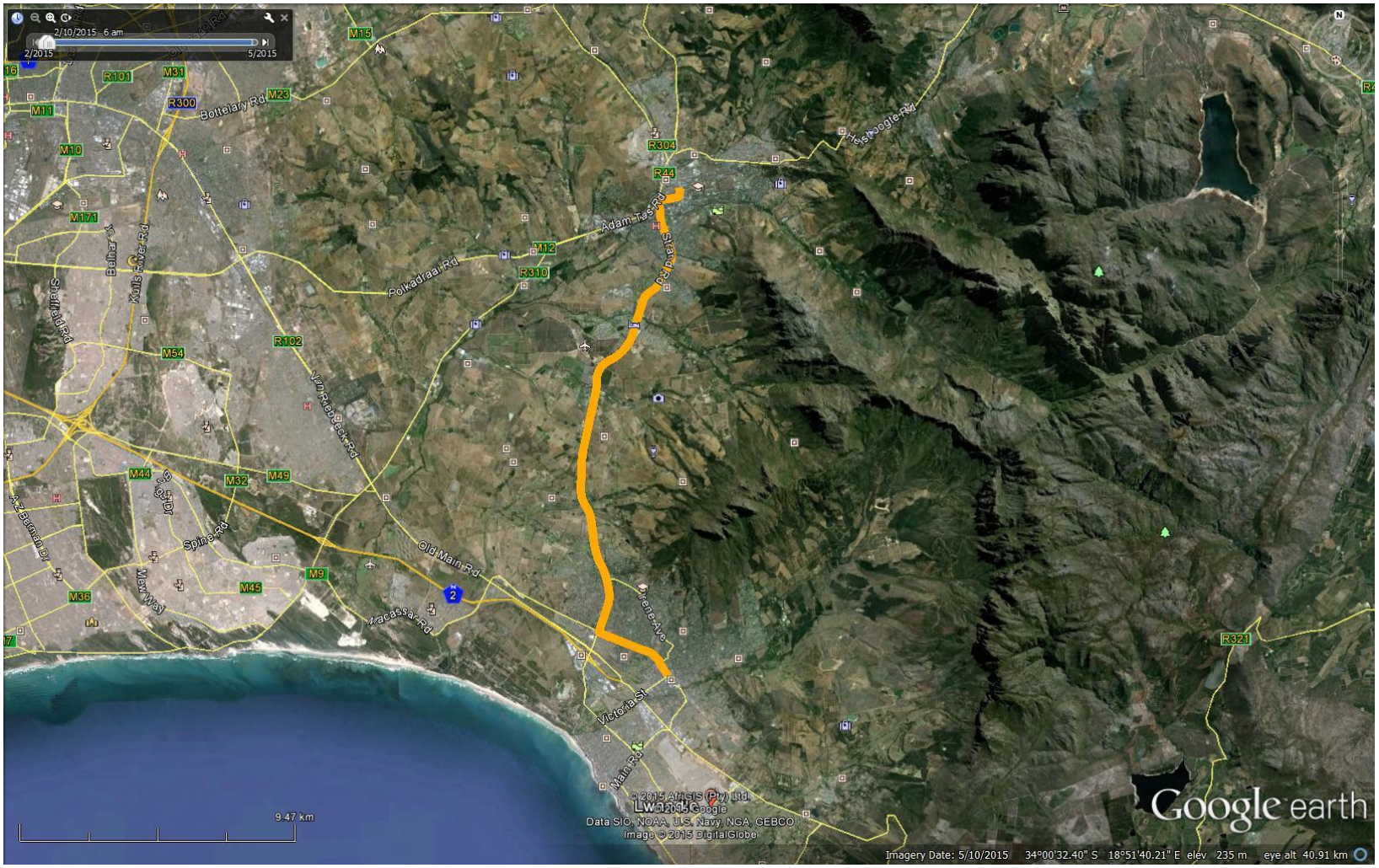
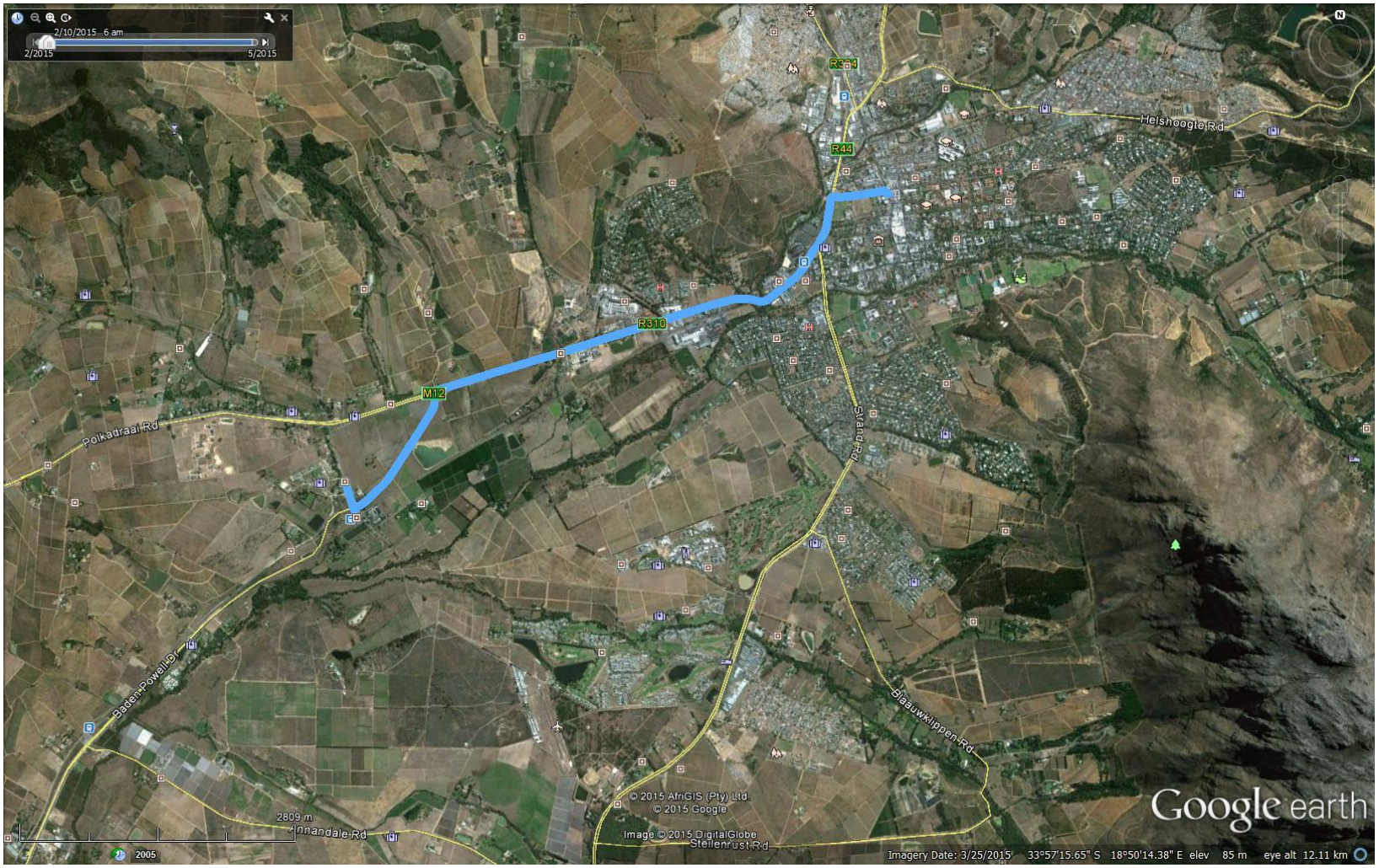


Figure 13-18: Routes Stellenbosch – Vlottenburg



ANNEXURE B: ROUTE DESCRIPTIONS

Table 13-6: Operating Licence Route Descriptions

Route	Route Description
Route: (630) Stellenbosch – Idasvalley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Merriman Avenue, left into Cluver Road until the robot to Idas Valley junction area and back as follows: straight into Cluver Street, straight into Victoria Street to central business area in Stellenbosch and the following junctions namely Paradyskloof, Onder Papagaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonalle Industrial area to the following conditions: 1. Passengers must only be picked-up at the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (631) Stellenbosch – Idas Valley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Jan Cilliers Street, right into Helshoogte Road until robot, left into Idas Valley junction area and back as follows: right into Helshoogte Road, left into Hammandshand Road until the central business area to the following conditions: 1. Passengers must only be picked-up in the Middeldorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (632) Stellenbosch – Idas Valley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Jan Cilliers Street, right into Helshoogte Road until the robots, left into Idas Valley junction area and back as follows: right into Helshoogte Road until at R44, left to central business area and junctions Paradyskloof, Onder Papegaai, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plankenburg Industrial building and Devonvalley Industrial building at following conditions:

Route	Route Description
	1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (633) Stellenbosch – Idas Valley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Merriman Avenue, left into Cluver Road to the robot at Idas Valley junction area and back as follows: straight into Cluver Road, right into Banhoek Road until at central business area Stellenbosch as the following conditions: 1. Passengers must only be picked-up in the middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and picked-up passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (634) Stellenbosch – Idas Valley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Merriman Avenue, left into Cluver Road to the robot at Idasvalley junction area and back as follows: straight into Cluver Road, straight into Marais Street, right into Van Riebeeck Street to the central business area Stellenbosch as the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (635) Stellenbosch – Idas Valley	From the Taxi Rank to Bloem Street at Stellenbosch, left into Bird Street, right into Merriman Avenue, left into Cluver Road to the robot at Idas Valley junction area and back as follows: straight into Cluver Road, around the circle, left into Merriman Avenue to the central business area Stellenbosch as the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station;

Route	Route Description
	2. Passengers must be picked-up at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (636) Stellenbosch – Cloetesville	From the Taxi Rank to Bloem Street in Stellenbosch, left into Bird Street right at R44, left into Langsuid Street to Cloetesville suburb and back as follows: right at R44 to Stellenboch central business area subject to the following conditions: 1. Passengers must be picked-up at all time at the allocated location; 2. No passengers must be picked-up in Bird Street; 3. Passengers must be picked-up at Du Toit Railway Station; 4. Passengers must be picked-up at all times at the allocated location, accept between 19:00 and 09:00 and if there is a legal parking zone.
Route: (637) Stellenbosch – Cloetesville	From the Taxi Rank to Bloem Street in Stellenbosch, left into Bird Street until Du Toit Station, right into Bell Street, left into Tennant Street, to Cloetesville suburb and back as follows: right into Bell Street, left into Bird Street until the central business area and suburb namely: Paradyskloof, Onder Papagaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonalle Industrial area to the following conditions: 1. Passengers must be picked-up at all times at the allocated locations; 2. No passengers must be picked-up in Bird Street; 3. Passengers must be picked-up at Du Toit Railway Station; 4. Passengers must be picked up at all times at the allocated locations, accept between 19:00 and 09:00.
656	Awaiting Information
657	Awaiting Information
658	Awaiting Information

Route	Route Description
659	Awaiting Information
660	Awaiting Information
661	Awaiting Information
662	Awaiting Information
663	Awaiting Information
Route: (664) Stellenbosch – Devon Valley	From the Taxi Rank to Merriman Avenue Stellenbosch, left into Merriman Avenue left at R44, right into Adam Tas Road, right at Stellenbosch Boere Wynmakery robot until Middelsvalley, turn into the Middelsvalley, turn right into Fisant Street until Devon valley Road junction, right into Devon Valley Road until J.C. Le Roux Devon Valley and back as follows: at Merriman Avenue Taxi Rank Stellenbosch including all the turnoffs to various farms on the route subject to the following conditions: 1. Passengers must be picked up at all times at Merriman Avenue Taxi Rank; 2. No passengers must be picked-up at Bird Street; 3. Passengers must be picked-up at Du Toit Railway Station; 4. Passengers must be picked-up at all times at the allocated location, accept between 19:00 and 09:00 and if there is a legal parking zone.
Route: (665) Stellenbosch – Cloetesville	From the Taxi Rank to Bergzight Stellenbosch, left into Bird Street right at R44, left into Langsuid Street to Cloetesville suburb and back as follows: right at R44 to Stellenbosch central business district subject to the following conditions: 1. Passengers must be picked-up at all times at the allocated locations; 2. No passengers must be picked-up in Bird Street; 3. Passengers must be picked-up at Du Toit Railway Station; 4. Passengers must be picked-up at all times at the allocated location, accept between 19:00 and 09:00 and if there is a legal parking zone.

Route	Route Description
Route: (666) Stellenbosch – Cloetesville	From the Taxi Rank to Bergzight Stellenbosch, left into Bird Street until Du Toit Station, right into Bell Street, left into Tennant Street, to Cloetesville suburb and back as follows: right into Bell Street, left into Bird Street to the central business district area namely: Paradyskloof, Onder Papagaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonalle Industrial area to the following conditions: 1. Passengers must be picked-up at all times at the allocated locations; 2. No passengers must be picked-up in Bird Street, 3. Passengers must be picked-up at Du Toit Railway Station; 4. Passengers must be picked up at all times at the allocated locations, accept between 19:00 and 09:00 and if there is a legal parking zone.
Route: (667) Stellenbosch – Pniel	From the Taxi Rank at Bloem Street outside Stellenbosch, right into Alexander Street, left into Bird Street, right into Merriman Avenue, left into Cluver Road, right into Nuwe Helshoogte Road until Die Werf into Pniel and back to the central business area suburb on the following discussions: 1. No passengers must be picked-up before Simonsberg Road and with the return to Simonsberg Street, with specific passengers at Stellenbosch Hospital that go to Kylemore can be picked-up; 2. Pension days the passengers in Khaler Street Idas Valley at the NG Church Centrum can be drop off.
Route: (668) Stellenbosch – Kylemore	From the Taxi Rank at Bloem Street Stellenbosch, right into Alexander Street, left into Bird Street, right into Merriman Avenue, left into Cluver Road, right into Nuwe Helshoogte Road, until the turn to right in Kylemore area and back to Stellenbosch central business are and the junctions namely Paradyskloof, Onder Papagaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonale Industrial area not included Cloeteville and Idas Valley and Kayamandi on the following conditions: 1. No passengers must be picked-up before Simonsberg Road and with the return to Simonsberg Street, with specific passengers at Stellenbosch Hospital that go to Kylemore can be picked-up; 2. Pension days the passengers in Khaler Street Idas Valley at the NG Church Centrum can be drop off; 3. Passengers must be picked-up at all times at Bloem Street outside the Taxi Rank; 4. Passengers can be picked up at Stellenbosch Railway Station;

Route	Route Description
	5. Passengers must be at all times at the shown pick-up points, accept for the times between 19:00 and 09:00 and if that is a legal parking zone.
Route: (669) Stellenbosch – Somerset West	From the Taxi Rank at Bloem Street outside Stellenbosch, left into Alexander Street, left into R44 until Somerset West, left into Main Road, right into Upper Orange Street, left into Church Street until the Taxi Rank at Somerset West and back as follows: at the R44, right into Alexander Street, right until Bloem Street outside the taxi Rank to the condition that with the way back from Somerset West may passengers only be picked-up at the Valley Road, not passengers may be picked up between Valley Road and Bloem Street Taxi Rank.
Route: (670) Stellenbosch – Jamestown	From the Taxi Rank at Bloem Street outside Stellenbosch, left into Alexander Street, left into R44, left into Paradyskloof Road and back, left into R44, left into Weber Valley road Jamestown and back as follows: right into R44, right into Alexander Street, right until Bloem Street outside the Taxi Rank Stellenbosch and the junction area namely Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devon Valley Industrial area, on the following conditions: 1. Passengers must be only picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone; 3. Passengers can be picked-up on the route between Jamestown and Die Boord.
Route: (671) Stellenbosch – Jamestown	From the Taxi Rank at Bloem Street outside Stellenbosch, right into Mark Street, right into Dorp Street, left into R44, left into Weber Valley Road Jamestown and back as follows: right into R44, right into Dorp Street, left into Mark Street, until Bloem Street outside the Taxi Rank at Stellenbosch and the junction areas namely Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal Unie Park, Simonswyk, Plakenburg Industrial area and Devonale Industrial area on the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at

Route	Route Description
	Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone; 3. Passengers can be picked-up on the route between Jamestown and Die Boord.
Route: (672) Stellenbosch – Lynedoch Station	From the Taxi Rank at Merriman Avenue Stellenbosch, left into R44, left Annandale Road until the dead end and back to R44, left R44 until Raithby and R44 crossing, turn back until Annandale and R44 crossing, left into Annandale Road until Lynedoch Station and back as follows: into Annandale Road, left R44, the same route back until Merriman Avenue Taxi Rank Stellenbosch.
Route: (673a & 673b) Stellenbosch – Elsenburg	From the Taxi Rank to Stelmark Stellenbosch, left into Banhoek Road, left into Andringa Street, left into Muller Street, right into Ds. Bothas Street, left into Jan Cillier Street, right into Bird Street, right at R44, right into Knorhoek Road until Delheim and back at R44, left into Elsenburg Road until Kromme Rhee Elsenburg and back as follow: at R44 left by robot, Lang Street south at R44 on main road 5 to Idas Valley, left at robot into Rustenburg Road, right into Sonneblom Street, left into Protea Street, left into Rustenburg Road until robot at Rustenburg Road and Helshoogte Road, right into Helshoogte Road, left into Hammanshand Road until Bird Street and left into Bird Street until the central business area of Stellenbosch subject to the following conditions: 1. No passengers must be picked-up between the Municipality area of Stellenbosch with the incoming route; 2. Passengers must only be picked-up at Stelmark Taxi Rank; 3. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (674a & 674b) Stellenbosch – Elsenburg	From the Taxi Rank to Stelmark Stellenbosch, left into Banhoek Road, left into Andringa Street, left into Muller Street, right into Ds. Bothas Street, left into Jan Cillier Street, right into Bird Street, right at R44, right into Knorhoek Road until Delheim and back at R44, left into Elsenburg Road until Kromme Rhee Elsenburg and back as follows: at R44, left into Mulders Valley Road, right to Vaaldraai and back to Mulders Valley Road, until Wiesenhof and back with the R44, right into Cloeteville, right into Hendrickse Street, left into Februarie Street, right into Lang Street until Essenhout Street, turn

Route	Route Description
	back into Lang Street, connect at Lang Street south, right into Tennant Street, right into Bell Street, left into Bird Street until at the central business area at Stellenbosch subject to the following conditions: 1. Passengers must be picked-up at all times at Stelmark Taxi Rank; 2. Passengers must be picked-up at Du Toit Station and taken to Elsenburg.
Route: (675) Stellenbosch – Jonkershoek	From the Taxi Rank at Stelmark Stellenbosch, left into Banhoek Road, right into Andringa Street, left into Merriman Avenue and connect at Martinson Street until Jonkershoek and back over the same route to the central business area from Stellenbosch and the junction areas namely Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonale Industrial area on the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone; 3. Passenger can be picked-up on the route between Jamestown and Die Boord.
Route: (676) Stellenbosch – Kayamandi	From the Taxi Rank at Bergzight, left Merriman Avenue, left into Adam Tas Road, right into George Blake Avenue until Kayamandi area and back as follows: into George Blake Avenue to Stellenbosch central business area namely Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonale Industrial area on the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone; 3. Passengers can be picked-up on the route between Jamestown and Die Boord.
Route: (677)	From the Taxi Rank at Bergzight Stellenbosch, left into Bird Street until Kayamandi robot to Kayamandi area and back as

Route	Route Description
Stellenbosch – Kayamandi	follows: right into Bird Street, to Stellenbosch central business area and junctions namely Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Unie Park, Simonswyk, Plakenburg Industrial area and Devonale Industrial area not included Cloeteville and Idas Valley on the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the picked-up points, accept for the time between 19:00 and 09:00 and if that is a legal parking zone.
Route: (722) Stellenbosch – Kayamandi	From the Taxi Rank at Bergzight Stellenbosch, left into Merriman Avenue, left into Adam Tas Road, right into Plankenberg Street, right into Bassis Street, straight in Mengo Street, left into Luyolo Street, right into Mondulo Street, left into Masithoane Street, into Six Avenue, right into Setoma Street, into Mengo Street Kayamandi and back on the same route.
Route: (723) Stellenbosch – Kayamandi	From the taxi rank at Bergzight Stellenbosch, left into Merriman Avenue, left into Bird Street, right into Plankenberg Street, right into Assis Street, straight into Mengo Street, left into Luyolo Street, right into Mondulo Street, left into Masithoane Street, into Six Avenue, right into Setoma Street, into Mengo Street Kayamandi and back on the same route.
Route: (754) Pniel – Paarl	From Pniel mission under, right into R310 until Pniel Primary School, right into Lanquedoc Main Road until the shopping centre, in R310, left into R45, right into Klapmuts Road (R101), into Main Road until Laborie shopping centre, right into Station Street, left into Hartford Street, right into Van Der Lingen Street until Taxi Rank at the Shoprite Paarl and back on the same route.
Route: (754) Pniel – Paarl	From Pniel mission under, right into R310 until Pniel Primary School, right into Lanquedoc Main Road until the shopping centre, in R310, left into R45, right into Klapmuts Road (R101), into Main Road until Laborie shopping centre, right into Station Street, left into Hartford Street, right into Van Der Lingen Street until Taxi Rank at the Shoprite Paarl and back on the same route.

Route	Route Description
Route: (755) Franschhoek – Paarl	From the shopping centre Franschhoek, into R45 until Wemmershoek School, right into R303 via Victor Verster until the circle, right into Bergrivier Boulevard, left into Van Der Lingen Street until Shoprite Paarl and back on the same route.
Route: (813) Kayamandi – Stellenbosch	From the Taxi Rank in Masithandane Street Kayamandi, left into Bassi Street, left into Mjandane Street, right into 9th Street, left into Veneyard Street, straight to Zone O, right into Bassi Street, left into 6th Avenue, left into 7th Avenue, right into 8th Avenue, right into Bassi Street, left into Mondi Crescent, right into Makupula Street, straight to Costa Housing Scheme, left into Sokuqala Street, left into Sethoba Street, right into Sesixhenxe Street, right into Sokuqala Street, left into Sesine Street, right into Sokuqala Street, left into Makupula Street, left into Luyolo Street, right into Ndzawumbi Street, left into Masithandane Street, straight into George Blake Avenue, left into Adam Tas Street, right into Merriman Avenue, right into Bergzight Taxi Rank Stellenbosch and return along the same route.
Route: (814) Kayamandi – Stellenbosch	From the Taxi Rank in Masithandane Street Kayamandi, left into Bassi Street, left into Mjandane Street, right into 9th Street, left into Veneyard Street, straight to Zone O, right into Bassi Street, left into 6th Avenue, left into 7th Avenue, right into 8th Avenue, right into Bassi Street, left into Mondi Crescent, right into Makupula Street, straight to Costa Housing Scheme, left into Sokuqala Street, left into Sethoba Street, right into Sesixhenxe Street, right into Sokuqala Street, left into Sesine Street, right into Sokuqala Street, left into Makupula Street, left into Luyolo Street, right into Ndzawumbi Street, left into Masithandane Street, right into Bird Street, straight on and the right into Merriman Avenue, left into Bergzight Taxi Rank Stellenbosch and return along the same route.
Route: (873) Franschhoek – Paarl	From the parking area at Spar Franschhoek, into Teservoir Street, left into the Main Road on R45 until Franschhoek North, right into La Province Road, left into School Street, right into Boonzaaier Road until the turn point into Langrug Settlement, back into Boonzaaier Road, into Le Roux Road, right into R45, left into Waterwese Road, into Ground Road to SAFCOL and back, turn at the centre and back, left on R45, next to R45 on the farms via Lubeck, Groot Krakenstein, Simondium, Corobrick (R45) until T-connection, right into Ou Paarl Road, right into Station Street, left into Hartford Street, right into Main Road, right into Van Den Lingen Street until the Taxi Rank at Shoprite Paarl and back on the same route.
Route: (A88)	From the Taxi Rank at Merriman Avenue Stellenbosch, into Merriman Avenue, left into Bird Street, bypass Kayamandi,

Route	Route Description
Stellenbosch – Kuilsrivier	left to Koelenhof, left to Botlary, left to Labelle Road, left into Van Riebeeck Road, right into Church Street, left into Carine Street, right into Mitchell Street, left into Station Road, right into De Kuilen Road, left into Langverwaght Street, right into Van Der Stel Street, left into Amandel Avenue Kuilsrivier and back on the same route.
Route: (F28a & F28b) Stellenbosch – Klapmuts	From the Taxi Rank at Stelmark Stellenbosch, left into Banhoek Road, left into Andringa Street, left into Muller Street, right into Ds Botha Street, left into Jan Cilliers Street, right into Bird Street, right into R44, right into Knorhoek Road until Delheim, back into R44, left into Elsenburg Road until Kromme Rhee and Elsenburg, back into R44, left into Muldersvalley Road, right to Vaaldraai, back to Muldersvalley Road, left into R44, along the R44 until Klapmuts area and Klapmuts Railway Station and back as follows: in R44, right into Cloetesville, right into Hendricks Street, left into Februarie Street, right into Lang Street, into Esenhout Street, back into Lang Street, into Lang Street south, right into Tennant Street, right into Bell Street, left into Bird Street until the central business area at Stellenbosch on the following conditions: 1. Passengers must only be picked-up in the Middedorp from Bloem Street Taxi Rank with specific passengers at Stellenbosch Hospital in Merriman Avenue and passengers from Stellenbosch Railway Station; 2. Passengers must be at all times at the pick-up points, accept for the time between 19:00 and if that is a legal parking zone.
Route: (N12) Stellenbosch – (Du Toit Station) – Belville	From Du Toit Station, left into Bird Street, into Koelenhof Road, left into Bottelary Road, left into Labelle Road, right into Strand Road, straight into Voortrekker Road, after the Stikland Bridge, left and right into Rail Road to Belville Taxi Rank and back on the same route, accept on the return journey to Koelenhof Road, turn right by Costa land to Kayamandi, and back into Bird Street to Du Toit Station.
Route: (N42) Franschhoek – Paarl	From the Taxi Rank at Spar, left on R45 Main Road until T-connection, right on the R101, right on the N1 slipway, left on the N1 slipway, left on the Aboretum Avenue until circle left to inside point at the Mall, from the pick-up point, left on Jones street, right on Nuwe Vleis Street, left on Pine Street, left on Main Road, left on the R45 to Taxi Rank at Franschhoek.

Route	Route Description
Route: (Q800 Kayamandi – Lwandle	From Kayamandi into George Blake Avenue, Right into Adam Tas Road onto the R44, left into M9 Main Road, Somerset West, right into Caledon Road, left onto the N2 Lwandle and back on the same route. Above routes are subject to the following conditions: A: That no passengers are picked up at any other taxi rank B: The vehicle must be registered in the name of the licence holder. C: The holder of this licence is prohibited from entering into any agreement whereby another party is permitted to undertake road transportation for own gain under authority of this licence. D: The complete route must be traversed and not only a portion of it. E: The authority is reviewable at any time. F: Operator to adhere to the code of conduct prescribed by the provincial registrar for minibus taxi operators. Local Authority Requirements: The authorised vehicle, whilst in a public transport facility, including a holding area that is provided for it by the city of Cape Town, is operated in accordance with any management procedures, and/or regulations that the city has put in place at that facility. The licence holder remaining a registered member of the taxi association of which he or she was a member at the date of the application for this licence. In the vent of the application leaving his/her association of which he/she was a member at the time of granting of this operating licence, the applicant shall forfeit his/her operating licence.

ANNEXURE C: OPERATING LICENCE DATABASE

Table 13-7: Operating Licences Franschhoek Taxi Association

FRANSCHHOEK TAXI ASSOCIATION	
EXECUTIVE COMMITTEE	
ASSISTANT TREASURER: MR D NTANTISO	074 370 7176
DISCIPLINARY CHAIRPERSON: MR P OLIPHANT	076 423 9669
GRIEVANCE CHAIRPERSON: MR AC LEIBRANDT	082 220 4336

Nr	Surname and Initials	ID Number	Operating Licence								Signature	Contact Nr
			OL Nr	Issue	Status	Issue Date	Expiration	Route Nr	RAS	Vehicles		
1	ANTHONY W	5509045131088	509797	5	A	2008-02-18	INDEFF	754	*	CJ35186		
2	BOOMAAIER RJ	6804305255084	504486	8	A	2012-06-08	INDEFF	754	*	CL51723		
3	BOONAAIER VP	7106010112082	518042	11	A	2011-10-13	INDEFF	755,A65,873	*	CL67598		
4	CYSTER W	6710265133080	502660	13	A	2012/02/29	INDEFF	873,755	*	CL55834		
			506285	11	A	2008-01-31	INDEFF	755,873		CL56280		
5	CYSTER RC	6611135223087	1524353	10	A	2013-10-02	2016/07/31	755,873	*	CL42341		

Nr	Surname and Initials	ID Number	Operating Licence								Signature	Contact Nr
			OL Nr	Issue	Status	Issue Date	Expiration	Route Nr	RAS	Vehicles		
6	CYSTER S	7005300086081	508337	8	A	2010-07-02	INDEFF	755,873	*	CL62541		
7	DAVIDS JDJ	3707155076083	510448	6	A	2009-01-09	INDEFF	755; 873		CJ446470		
8	DE WE SV	5610135088087	509286	9	A	2011-07-11	INDEFF	755, 873		CL62461		
9	FOKWANA M	5707075595087	1515410	11	A	2011-05-26	2016-05-31	755,873	*	CL43103		
10	GOLIATH H	6805105071084	517303	8	A	2008-03-14	INDEFF	755,873	*	CJ26877		
11	GOLIATH JSD	7010315020083	507924	5	A	2007-10-15	INDEFF	873,755	*	CJ21004		
			507855	6	A	2005/10/20	INDEFF	755,873		CJ25402		
12	GOLIATH L	6507255030080	504340	10	A	2008-09-23	INDEFF	873,755	*	CJ49863		
13	HENDRICKS N	5904255190082	505399	5	A	2008-10-22	INDEFF	873,755	*	CL32543		
14	JACOBS D	6602125120086	519648	5	A	2003/04/10	INDEFF	873	*	CL40274		
15	JACOBS J	5507285158084	509230	5	A	2011-11-18	INDEFF	754	*	CL13726		
16	JAFTHAS T	7110295479083	501367	6	A	2006/08/04	INDEFF	873,755	*	CJ16615		
			506209	7	A	2006-09-07	INDEFF	873,755		CJ12230		
17	JANUARIE G	5304055123088	509090	0	A	1992-09-04	INDEFF	ORGANISED PARTIES	*	CJ35364		
			506782	3	A	2007-11-21	INDEFF	873,775		CF59131		
18	JEFTHAS AJE	6001305244081	602962	5	A	2008-11-21	INDEFF	873,755	*	CL56476		
19	JEFTHAS R	7610125181080	501053	9	A	2010-06-02	INDEFF	755; 873	*	CL62441		
20	JOSEPH RR	8405285244086	503675	8	A	2014-12-08	INDEFF					
21	JULIES F	6501155095087	503548	6	A	2013-09-27	INDEFF	873,755	*	CJ40677		

Nr	Surname and Initials	ID Number	Operating Licence								Signature	Contact Nr
			OL Nr	Issue	Status	Issue Date	Expiration	Route Nr	RAS	Vehicles		
22	JULIES T	8010195146080	501514	7	A	2013-12-02	INDEFF	754		CJ66649		
23	KLEINSCHMIDT K	6702265186085	508992	5	A	2007-08-16	INDEFF	754	*	CL49242		
24	LAHOE D	6209280210080	504556	14	A	2010-09-23	INDEFF	755,873	*	CL14327		
25	LATEGAN TR	5810235215081	508853	5	A	2013-08-21	INDEFF	754	*	CL42618		
26	LEI-BRANDT AC	6305195145088	504726	6	A	2007-04-05	INDEFF	873,755	*	CL37454		
27	MAPHATHWANA SB	6302026167084	505401	6	A	2013-01-09	INDEFF	755,873	*	CFM78808		
28	MASELA B	7801125075089	504583	3	A	2006/03/14	INDEFF	G57	*	CL29509		
			504582	9	A	2010-03-31	INDEFF	G57		CA730818		
29	NTANTISO D	6312205883087	1528463	6	A	2010/11/09	2015/11/30	G57,L15,L67	*	CL60072		
30	NDLELA S	5809055818089	1801051	0	A	2012-01-30	2017-01-31	755; 873		CL50802		
31	NTSHWEZA EZ	5611165756080	1806016	0	A	2012/07/04	2017-07-31	G57,L61,L67	*	CL17132		
32	OCKHUIS I	6503155227082	1515609	13	A	2011/11/02	2016-11-30	755,873	*	CL44947		
33	OLIPHANT P	6209128209081	1515611	15	A	2011-12-20	2016/06/30	755,873	*	CL17022		
34	ROBERTSON A	4503165094086	505390	8	A	2011-07-27	INDEFF	755,873	*	CL13495		
35	RUITERS WC	6611265244084	505695	11	A	2012-10-15	INDEFF	755,873,N42	*	CL70004		
36	SCHIPPERS A	5111215126087	1527966	7	A	2011-08-11	2016/08/31	754	*	CL52341		
37	SWANEPOEL K	5401225021083	506187	7	A	2009-08-07	INDEFF	754	*	CF78550		
38	VAN AARDT J	3410265058089	501514	6	A	2009/12/08	INDEFF	754	*	CJ66649		

Nr	Surname and Initials	ID Number	Operating Licence								Signature	Contact Nr
			OL Nr	Issue	Status	Issue Date	Expiration	Route Nr	RAS	Vehicles		
39	WINTON CM	8004095018085	508905	7	A	2013-06-25	INDEFF	754	*	CL40297		
			508117	8	A	2013/06/25	INDEFF	754		CL44781		
40	XAKAZA Z	6012305840083	1666596	6	A	2013-03-27	2015/10/31	755,873,R13 ,R14,R15,R 16,N42	*	CJ39936		
			506149	9	A	2012/01/18	INDEFF	G57		CJ70433		
41	SIKHUPHELA L	8006035165082	1776527	6	A	2013-08-29	2017-02-28	754	*	CJ79457		
42	WARIES H	7303185111086	505129	5	A	2010-01-06	INDEFF	873		CL34897		

Nr	Surname and Initials	ID Number	Active Member with Non - Operating Licence								Address	Signature
			OL Nr		Status	Issue Date	Expiration	Route Nr	Ras	Contact Nr		
1	ANTHONY A	6603255058088							*			
2	BOOMAAIER DJ	6602225236089							*			
3	DE WET SV	5610135088087							*			
4	ADAMS D	7012135245080							*			
5	FRAZENBUR G AR	6305265162088							*			
6	MAGLINDANE S	3608015344085							*			

7	MARAIS AJ	5908035128015							*			
8	MENTOOR DM	4603270066084							*			
9	JOHN R	4406250171019							*			
	DATE OF LAST AGM		LATE ELECTIONS	2014								
	DATE DUE FOR AGM		REPORT	2014								
	NUMBER OF MEMBERS WITH ACTIVE PERMITS		42								LAST UPDATE 02 FEB 2015	
	NUMBER OF OL'S		49									
	QUORUM		28									
	ROUTES											
	754	PNIEL	PAARL									
	755	FRANSCHHOEK	PAARL									
	873	FRANSCHHOEK	PAARL									
	G15	KLAPMUTS	PAARL									
	G57	KLAPMUTS	PAARL									
	G58	KLAPMUTS	MULDERSVLEI STASIE									
	G59	KLAPMUTS	DANDARACH PLAAS PAARL									

	L63	KLAPMUTS	WILLLOWVALE									
	G61	KLAPMUTS	SIMONDIUM									
	G60	KLAPMUTS	STELLENBOSCH									
	M59	KLAPMUTS	KLAPMUTS									
	N42	FRANSCHHOEK	PAARL MALL									

Table 13-8: Operating Licences Stellenbosch Taxi Association

STELLENBOSCH TAXI ASSOCIATION
EXECUTIVE COMMITTEE
CHAIRPERSON: MR A MOSES - 083 228 1562
VICE CHAIRPERSON: MRS. AH ROBERTSON 076 333 8525
SECRETARY: MS. B WILLIAMS - 084997751
TREASURER: MRS. LS GEORGE 082 490 6733
DISCIPLINARY CHAIRPERSON: MR. VAN DER KERWEL D 083 232 2311
GRIEVANCE CHAIRPERSON: MR. JJ KEILLER 084 604 3230
ELECTION AGM: 24-02-2015

Nr	Surname and Initials	ID Number	Operating Licence							
			OL Nr	Issue	Status	Issue Date	Expiry Date	Vehicle	Route Nr	RAS
1	ADAMS N	5301295179086	508526	9	A	2007-03-16	INDEFINITE	NICKY1WP	667, 668	
2	AFRICA E	4011145072081								
3	AFRICA RH	7208015186085	502394	7	A	2013-04-25	INDEFINITE	ZANE1WP	670, 671, C/S	
4	ANTHONIE JC	6507145167084	506653	8	A	2012-02-10	INDEFINITE	CL55614	656, 657, 658, 659, 660, 661, C/S	
5	AFRICA SB	6708205101084	508181	8	A	2006-01-25	INDEFINITE	CL10332	669, 670, 671	
6	BERGSTEDT BP	4107115099086	1801386	0	A	2012-02-03	2017-02-28	CL37781	C/S, STAFF	
7	BOSCH NE	4409095158084	507936	7	A	2011-09-26	INDEFINITE	CL26952	673, 674, STAFF	

Nr	Surname and Initials	ID Number	Operating Licence							
			OL Nr	Issue	Status	Issue Date	Expiry Date	Vehicle	Route Nr	RAS
8	BROOKS A	3110095172080	503746	4	A	2008-11-12	INDEFINITE	CL34620	667, 668	
9	CORNELSON MT	7004155253086	502542	8	A	2011-09-28	INDEFINITE	CL17914	656, 657, 658, 659, 660, 661	
10	DE KOKER J	4512315006080	505082	10	A	2012-09-21	INDEFINITE	CL26098	630, 631, 632, 633, 634, 635	
11	DAVIDSE FD	6909155283084	503416	4	A	2005-11-23	INDEFINITE	CL24024	669, 670, 671	
12	DE VRIES M	5609135103029	504849	18	A	2012-11-12	INDEFINITE	CL48784	663	
13	GEORGE L S	7706120030080	507978..	6	A	2014-08-19	INDEFINITE	CL18264	656, 657, 658, 659, 660, 661	
14	GOUWS F	4611255170086	507943	5	A	2014-07-03	INDEFINITE	CF204897	673, 674	
15	GIDEON LP	5710305074089	514399	4	A	2014-05-29	INDEFINITE	CL13595	665, 666, C/S	
16	GEORGE EH	7609295139084	503574	8	A	2014-09-01	INDEFINITE	CL65488	665, 666, C/S	
17	GEORGE LS	77061200300080	507978	6	A	2014-08-19	INDEFINITE	CL18264	656, 657, 658, 659, 660	
18	J JACOBS	4103150072088	508095	5	A	2011-12-07	INDEFINITE	CL26232	665, 666	
19	JACOBS VM	4604070065086	500397	7	A	2013-01-09	INDEFINITE	CL12379	665, 666, STAFF, SCHOLAR	
20	JACOBS T	7602255156081	1802663	2	A	2012-03-01	INDEFINITE	CL35478	C/S, STAFF, SCHOLARS	
21	JOHNSON C	7103125242086	504088	5	A	2008-11-12	INDEFINITE	CL53491	656, 657, 658, 659, 660, C/S	
22	JONKERS K	5405265033080	504348	7	A	2011-07-25	INDEFINIT	636, 637		

Nr	Surname and Initials	ID Number	Operating Licence							
			OL Nr	Issue	Status	Issue Date	Expiry Date	Vehicle	Route Nr	RAS
							E			
23	JAFTA AA	7003295223082	508561	7	A	2010-08-02	INDEFINITE	CL22252	663, 664, C/S	
24	KEILLER JJ	5805305121086	508409	9	A	2013-10-25	INDEFINITE	CL26073	670, 671, C/S, STAFF	
25	LEWIS J	6311155222081	502971	5	A	2011-06-20	INDEFINITE	CL65735	636, 637	
26	LOGGENBERG M	2803185062010	502614	2	A	03/08/99	INDEFINITE	CL44603		
			509899	3	A	03/08/99	INDEFINITE	CL61369	669,670, 671	
			505101		A	2000/11/17	INDEFINITE	CL55413	673, 674, F38	
			504749	1	A	31/08/99	INDEFINITE	CL47308	665, 666	
			506517	1	A	18/01/01	INDEFINITE	CL26588	665, 666	
			507845	2	A	24/10/00	INDEFINITE	CL32014	665, 666	
			506988	1	A	30/07/99	INDEFINITE	CL23483	666, 667	
			500296	3	A	24/10/00	INDEFINITE	CL32016	636, 637	
			500381	1	A	31/08/99	INDEFINITE	CL28476	665, 666	
			500435	2	A	31/08/99	INDEFINITE	CL50176	665, 666	
			501342	3	A	24/02/00	INDEFINITE	CL8728	665, 666	

Nr	Surname and Initials	ID Number	Operating Licence							
			OL Nr	Issue	Status	Issue Date	Expiry Date	Vehicle	Route Nr	RAS
27	MONK C	3610200452087	516947	3		12/12/07	INDEFINITE	CL44770	665, 666	
28	MOSES AL	5911035032088	504844	10	A	2014-08-26	INDEFINITE	CL69719	663, 664, C/S	
29	PLAATJIES A	6704100450080	507953	6	D	2014-09-01	INDEFINITE	CL13727	630, 631, 632, 633, 634, 635	
30	PIETERSEN M	6603055742089	520239	1	A	2002-09-23	INDEFINITE	CL32017	670, 671	
31	PETERSEN JA	4503165086082	504697	4	A	2004-04-02	INDEFINITE	CL37650	667, 668	
32	POOL AC	4102175036086	1757522	3	A	2014-08-01	2016-10-31	CL73933	675	
33	POOL MZ	7711225142087	508280	6	A	2012-10-15	INDEFINITE	CL78692	667, 668	
34	POOL A	4203280264011	1757522	3	A	2014-08-01	2016-10-31	CL73933	675	
35	POOL MS	5009195128083	507951	8	A	2012-07-11	INDEFINITE	CL67530	656, 657, 658, 659, 660, 661, C/S	
36	POOL M	8409240267083	508064	9	A	2013-01-08	INDEFINITE	CL69021	656, 657, 658, 659, 660, 661	
37	PIETERSEN SM	4408150477082	508846	7	A	2014-07-31	INDEFINITE	CL24530	656, 657, 658, 659, 660, 661	
38	ROBERTSON CF	5107120156086	508316	5	A	2011-07-27	INDEFINITE	CL14743	667, 668	
39	ROBERTSON AH	4503165094086	503676	6	A	2011-02-02	INDEFINITE	CL64025	667, 668	
40	ROBERTSON EH	8405095042084	506277	7	A	2009-04-15	INDEFINITE	CL53782	667, 668	
41	RHODE MZ	8512045202088	503626	6	A	2001-07-19	INDEFINITE	CL18995	663, 664, STAFF, C/S	

Nr	Surname and Initials	ID Number	Operating Licence							
			OL Nr	Issue	Status	Issue Date	Expiry Date	Vehicle	Route Nr	RAS
42	RHODE L	5905045142085	509853	6	A	2012-04-04	INDEFINITE	CL13344	665, 666, C/S	
43	RHODE L	9103155401089	509854	9	A	2014-08-05	INDEFINITE	CL39837	665, 666, C/S	
44	SMITH W	4703155149086	183575							
45	SOLOMONS JM	5509155081081	519345	4	A	2010-05-20	INDEFINITE	CL20838	656, 657, 658, 659, 660, 661	
46	SOLOMONS SJ	8312095003084	501700	11	A	2014-10-08	INDEFINITE	CL55497	663, 664 STAFF	
47	SEPTMBER SJ	5003295082084	508187	4	A	2011-06-11	INDEFINITE	CL5114	670, 671	
48	UNCLE SOLLYS INDUSTRIES (PTY)LTD	201314011507	502725	6	A	2014-10-24	INDEFINITE	CL68706	672, STAFF	
49	VAN KERWEL FF	7203145225085	1805384	0	A	2012-06-06	2017-06-30	CL228	STAFF	
50	VAN KERWEL D	6209045032084	1806889	0	S	2012-08-23	2017-08-31	CL28876	suspended	
51	VAN KERWEL FF	4204145066084	1803031	0	A	2012-03-14	2015-09-30	CL651	STAFF	
52	VERMEULEN C	5507055013089	502193	7	A	2009-04-28	INDEFINITE	CL60873	662	
53	WILLIAMS SMJ	6608305231080	508527	20	A	2012-04-26	INDEFINITE	CL53782	675	
54	WILLIAMS BD	7012300425087	502261	9	A	2009-11-13	INDEFINITE	CL283	667,668	

Nr	Surname and Initials	ID Number	Active Member with Non - Operating Licence									
			OL Nr		Status	Issue Date	Expiration	Route Nr	Ras	Contact Nr	Address	Signature

1	ANTHONY A	6603255058088							*			
2	BOOMAAIER DJ	6602225236089							*			
3	DE WET SV	5610135088087							*			
4	ADAMS D	7012135245080							*			
5	FRAZENBURG AR	6305265162088							*			
6	MAGLINDANE S	3608015344085							*			
7	MARAIS AJ	5908035128015							*			
8	MENTOOR DM	4603270066084							*			
9	JOHN R	4406250171019							*			
	DATE OF LAST AGM		LATE ELECTIONS	2014								
	DATE DUE FOR AGM		REPORT	2014								
	NUMBER OF MEMBERS WITH ACTIVE PERMITS		42								LAST UPDATE 02 FEB 2015	
	NUMBER OF OL'S		49									
	QUORUM		28									

ROUTES											
754	PNIEL	PAARL									
755	FRANSCHHOEK	PAARL									
873	FRANSCHHOEK	PAARL									
G15	KLAPMUTS	PAARL									

G57	KLAPMUTS	PAARL									
G58	KLAPMUTS	MULDERSVLEI STASIE									
G59	KLAPMUTS	DANDARACH PLAAS PAARL									
L63	KLAPMUTS WILLLOWVALE										
G61	KLAPMUTS	SIMONDIUM									
G60	KLAPMUTS	STELLENBOSCH									
M59	KLAPMUTS	KLAPMUTS									
N42	FRANSCHHOEK	PAARL MALL									

Table 13-9: Operating Licences Kayamandi Taxi Association

KAYAMANDI TAXI ASSOCIATION	
	ADMINISTRATOR
EXECUTIVE COMMITTEE	
CHAIRPERSON: MR MM MONAHENG	083 887 4177
VICE CHAIRPERSON: MR T MBESHU	083 439 2544
SECRETARY: MR N MAYEZANA	073 540 6119
ASSISTANT SECRETARY: MR DINGE	074 473 3979
TREASURER: MR MA LUZIPHO	
ASSISTANT TREASURER: MR NE TSHALI	
DISCIPLINARY CHAIRPERSON: MR V NZIWENI	
GRIEVANCE CHAIRPERSON: MR M MATWA	

Nr	Surname and Initials	ID Number	Operating Licence								Signatures
			OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes	
1	BATALA AM	5604295571081	520377	3	A	200-03-09	INDEF	CL15810	*	676 677	
2	BINTA GB	5612235747083	602437	2	A	21/07/00	INDEF	CL20123	*	676 677	
3	BUTI A	5311105808089	1619965	3	A	24/02/11	2016-02-28	CL15771	*	N12	

Nr	Surname and Initials	ID Number	Operating Licence								Signatures
			OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes	
4	DALICUBA M	7104105458080	1804822	0	A	18/05/12	2017-05-31	CL20819	*	676 677	
5	DINGE MR	6904185642086	1622044	3	A	08/03/11	2016-03-31	CL45019	*	N12	
6	JULAYI A	8108265717085	1805046	1	A	20/06/12	2017-05-31	CL46830	*	676 677	
7	LUZIPHO M	6407265845082	1804859	3	A	22/10/13	2017-05-31	CL57429		676, 677	
8	MAQAGA M	6903156169087	502988	8	A	17/07/12	INDEF	CL56525		676 677	
9	MATWA M	6703025972087	1804791	2	A	18/07/12	2017-05-31	CL44525	*	676 677	
10	MATYALANA N	7610205780082	1814140	0	A	06/05/13	2018-05-31	CL52646	*	676 677	
11	MATYATYA H	5810185763080	504354	1	A	08/05/98	INDEF	CL56789	*	KAYAMANDI/STELLN	
12	MAVUMBA MT	5509015697084	502419	3	A	21/09/12	INDEF	CL7873	*	676 677	
13	MAYEPU TJ	7307115334080	1804862	2	A	15/07/13	2017-05-31	CL37374		676, 677	
14	MAYEZANA H	7506195476089	1804821	0	A	18/05/12	2017-05-31	CL52644	*	676 677	
			1815703	1	A	08/10/13	2018-06-30	CL34028		676 677	

Nr	Surname and Initials	ID Number	Operating Licence								Signatures
			OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes	
15	MBESHU T	7202106259087	1619401	3	A	31/03/11	2016-03-31	CL36247	*	N12	
			1780100	2	A	06/06/12	2017-06-30	CF175499		Q80	
16	MBUNDWINI NT	6606025702083	1806352	2	A	22/04/14	2017-07-31	CL37700	*	676 677	
17	MOHANENG MM	5905055946086	1814304	1	A	10/09/14	2018-05-31	CL11176	*	676, 677,	
			1804750	2	A	25/04/13	2017-05-31	CL16548		676, 677	
18	MOSOMOTHANE TM	2904155147086	507379	6	A	27/02/06	INDEF	CL39532	*	676 677	
19	MTIYA N	5506120723086	1806309	1	A	11/07/13	2017-07-31	CL59948	*	676 677	
20	NOQAYO MG	7105315382085	1815007	0	A	13/06/13	2018-06-30	CL52556	*	676 677	
21	NZIWENI V	7106056472085	1619851	5	A	12/05/11	2016-05-31	CL62506	*	N12	
22	RATSHANA K	3602145198081	602125	0	A	04/12/98	INDEF	CL16122		813 814	
23	SONGELWA M	5808085279088	1620231	3	A	14/03/11	2016-03-31	CL16802	*	N12	
24	SIKATI NT	6606025702083	1806352	2	A	22/04/14	2017-07-31	CL37700		676, 677	

Nr	Surname and Initials	ID Number	Operating Licence								Signatures
			OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes	
25	SIPHUHLE M	6901018249089	1787102	1	A	05/10/11	2016-03-31	CL60829	*	N12	
26	TOBO TB	3904165318080	1811631	2	A	31/07/13	2018-01-31	CL23558	*	676 677	
27	TSHOTSHO BS	6010315379084	1804868	2	A	15/11/12	2017-05-31	CL10994	*	676 677	
28	YENZELA JL	3301016711086	1501072	0	A	08/09/99	INDEF	CL22201	*	676 677	
29	ZENGELE M	7411255638084	1814252	2	A	28/06/13	2018-05-31	CL29031	*	676 677	

	MEMBERS REGISTERED WITH THE ASSOCIATION BUT HAVE NO PERMITS										
	BALENI LH	5908155722808 7	520928	1	A	12/03/91	INDEF	CL11667	*	LONG DISTANCE	
	DALICUBA JE	3508175159085							*		
	DE KOKER EVS	4905160054082							*		
	GALI Z	6610265705087							*		
	GXILISHE MA	1204225073086							*		
	KHOHLAKALA K	6606205926080							*		
	LUZIPHO M	6407265845082							*		
	MAFUTHA SR										
	MAKWASA NL										
	MAKWASA NGV	5611260789085							*		

	MALETI LZ								*		
	MALITI P	6412020843083							*		
	MAQUBELA W	DECEASED							*		
	MATSHOBA F	6709045657087							*		
	MAYEPU T	7307115334080									
	MGIJIMA ZA	4408255340086	510200	4	A	19/12/06	INDEF	CL61838	*	ORGANISED PARTIES	DECEASED
	MSITSHANA MN	6812070765088	505605	6	A	03/09/13	INDEF	CL37848	*	T46 (LONG DISTANCE)	
	NQABAYI T	7206166245080							*		
	RATSHANA K	3602145198081							*		
	TSHALI NE	7012246276081							*		
	ZATHU K	7106205814088							*		
	ZOTHE XB	7109045966084							*		
	DATE OF LAST AGM		ELECTIONS	2014							
	DATE DUE FOR AGM		REPORT	2015							
	NUMBER OF ACTIVE MEMBERS WITH PERMITS		29								
	NUMBER OF PERMITS		34								
	QUORUM		20								
	ROUTES										
	N12 STELLENBOSCH	BELLVILLE									

	676	STELLENBOSCH	CLOETESVILLE									
	677	STELLENBOSCH	PNIEL									
	813	KAYAMANDI	STELLENBOSCH									
	814	KAYAMANDI	STELLENBOSCH									
	Q80	KAYAMANDI	LWANDLE									

Table 13-10: Operating Licences Franschhoek Taxi Association – Consolidated Spreadsheet

FRANSCHHOEK TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
1	ANTHONY W	5509045131088	509797	5	A	2008-02-18	INDEFF	CJ35186	*	754
2	BOOMAAIER RJ	6804305255084	504486	8	A	2012-06-08	INDEFF	CL51723	*	754
3	BOONAAIER VP	7106010112082	518042	11	A	2011-10-13	INDEFF	CL67598	*	755, A65, 873
4	CYSTER W	6710265133080	502660	13	A	2012/02/29	INDEFF	CL55834	*	755, 873
5	CYSTER W	6710265133081	506285	11	A	2008-01-31	INDEFF	CL56280		755, 873
6	CYSTER RC	6611135223087	1524353	10	A	2013-10-02	2016/07/31	CL42341	*	755, 873
7	CYSTER S	7005300086081	508337	8	A	2010-07-02	INDEFF	CL62541	*	755, 873
8	DAVIDS JDJ	3707155076083	510448	6	A	2009-01-09	INDEFF	CJ446470		755, 873
9	DE WE SV	5610135088087	509286	9	A	2011-07-11	INDEFF	CL62461		755, 873
10	FOKWANA M	5707075595087	1515410	11	A	2011-05-26	2016-05-31	CL43103	*	755, 873
11	GOLIATH H	6805105071084	517303	8	A	2008-03-14	INDEFF	CJ26877	*	755, 873
12	GOLIATH JSD	7010315020083	507924	5	A	2007-10-15	INDEFF	CJ21004	*	755, 873
13	GOLIATH JSD	7010315020084	507855	6	A	2005/10/20	INDEFF	CJ25402		755, 873
14	GOLIATH L	6507255030080	504340	10	A	2008-09-23	INDEFF	CJ49863	*	755, 873
15	HENDRICKS N	5904255190082	505399	5	A	2008-10-22	INDEFF	CL32543	*	755, 873
16	JACOBS D	6602125120086	519648	5	A	2003/04/10	INDEFF	CL40274	*	873
17	JACOBS J	5507285158084	509230	5	A	2011-11-18	INDEFF	CL13726	*	754
18	JAFTHAS T	7110295479083	501367	6	A	2006/08/04	INDEFF	CJ16615	*	755, 873

FRANSCHHOEK TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
19	JAFTHAS T	7110295479084	506209	7	A	2006-09-07	INDEFF	CJ12230		755, 873
20	JANUARIE G	5304055123088	509090	0	A	1992-09-04	INDEFF	CJ35364	*	ORGANISED PARTIES
21	JANUARIE G	5304055123089	506782	3	A	2007-11-21	INDEFF	CF59131		755, 873
22	JEFTHAS AJE	6001305244081	602962	5	A	2008-11-21	INDEFF	CL56476	*	755, 873
23	JEFTHAS R	7610125181080	501053	9	A	2010-06-02	INDEFF	CL62441	*	755, 873
24	JOSEPH RR	8405285244086	503675	8	A	2014-12-08	INDEFF			
25	JULIES F	6501155095087	503548	6	A	2013-09-27	INDEFF	CJ40677	*	755, 873
26	JULIES T	8010195146080	501514	7	A	2013-12-02	INDEFF	CJ66649		754
27	KLEINSCHMIDT K	6702265186085	508992	5	A	2007-08-16	INDEFF	CL49242	*	754
28	LAHOE D	6209280210080	504556	14	A	2010-09-23	INDEFF	CL14327	*	755, 873
29	LATEGAN TR	5810235215081	508853	5	A	2013-08-21	INDEFF	CL42618	*	754
30	LEI-BRANDT AC	6305195145088	504726	6	A	2007-04-05	INDEFF	CL37454	*	755, 873
31	MAPHATHWANA SB	6302026167084	505401	6	A	2013-01-09	INDEFF	CFM78808	*	755, 873
32	MASELA B	7801125075089	504583	3	A	2006/03/14	INDEFF	CL29509	*	G57
33	MASELA B	7801125075090	504582	9	A	2010-03-31	INDEFF	CA730818		G57
34	NTANTISO D	6312205883087	1528463	6	A	2010/11/09	2015/11/30	CL60072	*	G57,L15,L67
35	NDLELA S	5809055818089	1801051	0	A	2012-01-30	2017-01-31	CL50802		755, 873
36	NTSHWEZA EZ	5611165756080	1806016	0	A	2012/07/04	2017-07-31	CL17132	*	G57,L61,L67
37	OCKHUIS I	6503155227082	1515609	13	A	2011/11/02	2016-11-30	CL44947	*	755, 873

FRANSCHHOEK TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
38	OLIPHANT P	6209128209081	1515611	15	A	2011-12-20	2016/06/30	CL17022	*	755, 873
39	ROBERTSON A	4503165094086	505390	8	A	2011-07-27	INDEFF	CL13495	*	755, 873
40	RUITERS WC	6611265244084	505695	11	A	2012-10-15	INDEFF	CL70004	*	755, 873, N42
41	SCHIPPERS A	5111215126087	1527966	7	A	2011-08-11	2016/08/31	CL52341	*	754
42	SWANEPOEL K	5401225021083	506187	7	A	2009-08-07	INDEFF	CF78550	*	754
43	VAN AARDT J	3410265058089	501514	6	A	2009/12/08	INDEFF	CJ66649	*	754
44	WINTON CM	8004095018085	508905	7	A	2013-06-25	INDEFF	CL40297	*	754
45	WINTON CM	8004095018086	508117	8	A	2013/06/25	INDEFF	CL44781		754
46	XAKAZA Z	6012305840083	1666596	6	A	2013-03-27	2015/10/31	CJ39936	*	755,873,R13,R14,R15,R16,N42
47	XAKAZA Z	6012305840084	506149	9	A	2012/01/18	INDEFF	CJ70433		G57
48	SIKHUPHELA L	8006035165082	1776527	6	A	2013-08-29	2017-02-28	CJ79457	*	754
49	WARIES H	7303185111086	505129	5	A	2010-01-06	INDEFF	CL34897		873
50	Blank 1									
51	Blank 2									
52	Blank 3									
53	Blank 4									
54	Blank 5									
55	Blank 6									
56	Blank 7									

FRANSCHHOEK TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
57	Blank 8									

Table 13-11: Operating Licences Stellenbosch Taxi Association – Consolidated Spreadsheet

STELLENBOSCH TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
1	ADAMS N	5301295179086	508526	9	A	2007-03-16	INDEFINITE	NICKY1WP		667, 668
2	AFRICA E	4011145072081								
3	AFRICA RH	7208015186085	502394	7	A	2013-04-25	INDEFINITE	ZANE1WP		670, 671, C/S
4	ANTHONIE JC	6507145167084	506653	8	A	2012-02-10	INDEFINITE	CL55614		656, 657, 658, 659, 660, 661, C/S
5	AFRICA SB	6708205101084	508181	8	A	2006-01-25	INDEFINITE	CL10332		669, 670, 671
6	BERGSTEDT BP	4107115099086	1801386	0	A	2012-02-03	2017-02-28	CL37781		C/S, STAFF
7	BOSCH NE	4409095158084	507936	7	A	2011-09-26	INDEFINITE	CL26952		673, 674, STAFF
8	BROOKS A	3110095172080	503746	4	A	2008-11-12	INDEFINITE	CL34620		667, 668
9	CORNELSON MT	7004155253086	502542	8	A	2011-09-28	INDEFINITE	CL17914		656, 657, 658, 659, 660, 661
10	DE KOKER J	4512315006080	505082	10	A	2012-09-21	INDEFINITE	CL26098		630, 631, 632, 633, 634, 635
11	DAVIDSE FD	6909155283084	503416	4	A	2005-11-23	INDEFINITE	CL24024		669, 670, 671
12	DE VRIES M	5609135103029	504849	18	A	2012-11-12	INDEFINITE	CL48784		663
13	GEORGE L S	7706120030080	507978..	6	A	2014-08-19	INDEFINITE	CL18264		656, 657, 658, 659, 660, 661
14	GOUWS F	4611255170086	507943	5	A	2014-07-03	INDEFINITE	CF204897		673, 674

STELLENBOSCH TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
15	GIDEON LP	5710305074089	514399	4	A	2014-05-29	INDEFINITE	CL13595		665, 666, C/S
16	GEORGE EH	7609295139084	503574	8	A	2014-09-01	INDEFINITE	CL65488		665, 666, C/S
17	GEORGE LS	7706120030008 0	507978	6	A	2014-08-19	INDEFINITE	CL18264		656, 657, 658, 659, 660
18	J JACOBS	4103150072088	508095	5	A	2011-12-07	INDEFINITE	CL26232		665, 666
19	JACOBS VM	4604070065086	500397	7	A	2013-01-09	INDEFINITE	CL12379		665, 666, STAFF, SCHOLAR
20	JACOBS T	7602255156081	1802663	2	A	2012-03-01	INDEFINITE	CL35478		C/S, STAFF, SCHOLARS
21	JOHNSON C	7103125242086	504088	5	A	2008-11-12	INDEFINITE	CL53491		656, 657, 658, 659, 660, C/S
22	JONKERS K	5405265033080	504348	7	A	2011-07-25	INDEFINITE			636, 637
23	JAFTA AA	7003295223082	508561	7	A	2010-08-02	INDEFINITE	CL22252		663, 664, C/S
24	KEILLER JJ	5805305121086	508409	9	A	2013-10-25	INDEFINITE	CL26073		670, 671, C/S, STAFF
25	LEWIS J	6311155222081	502971	5	A	2011-06-20	INDEFINITE	CL65735		636, 637
26	LOGGENBERG M	2803185062010	502614	2	A	03/08/99	INDEFINITE	CL44603		
27	LOGGENBERG M	2803185062011	509899	3	A	03/08/99	INDEFINITE	CL61369		669, 670, 671
28	LOGGENBERG M	2803185062012	505101		A	2000/11/17	INDEFINITE	CL55413		673, 674, F38
29	LOGGENBERG M	2803185062013	504749	1	A	31/08/99	INDEFINITE	CL47308		665, 666
30	LOGGENBERG M	2803185062014	506517	1	A	18/01/01	INDEFINITE	CL26588		665, 666
31	LOGGENBERG M	2803185062015	507845	2	A	24/10/00	INDEFINITE	CL32014		665, 666
32	LOGGENBERG M	2803185062016	506988	1	A	30/07/99	INDEFINITE	CL23483		666, 667
33	LOGGENBERG M	2803185062017	500296	3	A	24/10/00	INDEFINITE	CL32016		636, 637

STELLENBOSCH TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
34	LOGGENBERG M	2803185062018	500381	1	A	31/08/99	INDEFINITE	CL28476		665, 666
35	LOGGENBERG M	2803185062019	500435	2	A	31/08/99	INDEFINITE	CL50176		665, 666
36	LOGGENBERG M	2803185062020	501342	3	A	24/02/00	INDEFINITE	CL8728		665, 666
37	MONK C	3610200452087	516947	3		12/12/07	INDEFINITE	CL44770		665, 666
38	MOSES AL	5911035032088	504844	10	A	2014-08-26	INDEFINITE	CL69719		663, 664, C/S
39	PLAATJIES A	6704100450080	507953	6	D	2014-09-01	INDEFINITE	CL13727		630, 631, 632, 633, 634, 635
40	PIETERSEN M	6603055742089	520239	1	A	2002-09-23	INDEFINITE	CL32017		670, 671
41	PETERSEN JA	4503165086082	504697	4	A	2004-04-02	INDEFINITE	CL37650		667, 668
42	POOL AC	4102175036086	1757522	3	A	2014-08-01	2016-10-31	CL73933		675
43	POOL MZ	7711225142087	508280	6	A	2012-10-15	INDEFINITE	CL78692		667, 668
44	POOL A	4203280264011	1757522	3	A	2014-08-01	2016-10-31	CL73933		675
45	POOL MS	5009195128083	507951	8	A	2012-07-11	INDEFINITE	CL67530		656, 657, 658, 659, 660, 661, C/S
46	POOL M	8409240267083	508064	9	A	2013-01-08	INDEFINITE	CL69021		656, 657, 658, 659, 660, 661
47	PIETERSEN SM	4408150477082	508846	7	A	2014-07-31	INDEFINITE	CL24530		656, 657, 658, 659, 660, 661
48	ROBERTSON CF	5107120156086	508316	5	A	2011-07-27	INDEFINITE	CL14743		667, 668
49	ROBERTSON AH	4503165094086	503676	6	A	2011-02-02	INDEFINITE	CL64025		667, 668
50	ROBERTSON EH	8405095042084	506277	7	A	2009-04-15	INDEFINITE	CL53782		667, 668
51	RHODE MZ	8512045202088	503626	6	A	2001-07-19	INDEFINITE	CL18995		663, 664, STAFF, C/S
52	RHODE L	5905045142085	509853	6	A	2012-04-04	INDEFINITE	CL13344		665, 666, C/S

STELLENBOSCH TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
53	RHODE L	9103155401089	509854	9	A	2014-08-05	INDEFINITE	CL39837		665, 666, C/S
54	SMITH W	4703155149086	183575							
55	SOLOMONS JM	5509155081081	519345	4	A	2010-05-20	INDEFINITE	CL20838		656, 657, 658, 659, 660, 661
56	SOLOMONS SJ	8312095003084	501700	11	A	2014-10-08	INDEFINITE	CL55497		663, 664 STAFF
57	SEPTMBER SJ	5003295082084	508187	4	A	2011-06-11	INDEFINITE	CL5114		670, 671
58	UNCLE SOLLYS INDUSTRIES (PTY)LTD	201314011507	502725	6	A	2014-10-24	INDEFINITE	CL68706		672, STAFF
59	VAN KERWEL FF	7203145225085	1805384	0	A	2012-06-06	2017-06-30	CL228		STAFF
60	VAN KERWEL D	6209045032084	1806889	0	S	2012-08-23	2017-08-31	CL28876		suspended
61	VAN KERWEL FF	4204145066084	1803031	0	A	2012-03-14	2015-09-30	CL651		STAFF
62	VERMEULEN C	5507055013089	502193	7	A	2009-04-28	INDEFINITE	CL60873		662
63	WILLIAMS SMJ	6608305231080	508527	20	A	2012-04-26	INDEFINITE	CL53782		675
64	WILLIAMS BD	7012300425087	502261	9	A	2009-11-13	INDEFINITE	CL283		667, 668
65	Blank 1									A88
66	Blank 2									F28
67	Blank 3									
68	Blank 4									
69	Blank 5									
70	Blank 6									

STELLENBOSCH TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
71	Blank 7									

Table 13-12: Operating Licences Kayamandi Taxi Association – Consolidated Spreadsheet

KAYAMANDI TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
1	BATALA AM	5604295571081	520377	3	A	20/03/09	INDEF	CL15810	*	676, 677
2	BINTA GB	5612235747083	602437	2	A	21/07/00	INDEF	CL20123	*	676, 677
3	BUTI A	5311105808089	1619965	3	A	24/02/11	2016-02-28	CL15771	*	N12
4	DALICUBA M	7104105458080	1804822	0	A	18/05/12	2017-05-31	CL20819	*	676, 677
5	DINGE MR	6904185642086	1622044	3	A	08/03/11	2016-03-31	CL45019	*	N12
6	JULAYI A	8108265717085	1805046	1	A	20/06/12	2017-05-31	CL46830	*	676, 677
7	LUZIPHO M	6407265845082	1804859	3	A	22/10/13	2017-05-31	CL57429		676, 677
8	MAQAGA M	6903156169087	502988	8	A	17/07/12	INDEF	CL56525		676, 677
9	MATWA M	6703025972087	1804791	2	A	18/07/12	2017-05-31	CL44525	*	676, 677
10	MATYALANA N	7610205780082	1814140	0	A	06/05/13	2018-05-31	CL52646	*	676, 677
11	MATYATYA H	5810185763080	504354	1	A	08/05/98	INDEF	CL56789	*	KAYAMANDI/STELLN
12	MAVUMBA MT	5509015697084	502419	3	A	21/09/12	INDEF	CL7873	*	676, 677
13	MAYEPU TJ	7307115334080	1804862	2	A	15/07/13	2017-05-31	CL37374		676, 677

KAYAMANDI TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
14	MAYEZANA H	7506195476089	1804821	0	A	18/05/12	2017-05-31	CL52644	*	676, 677
15	MAYEZANA H	7506195476090	1815703	1	A	08/10/13	2018-06-30	CL34028		676, 677
16	MBESHU T	7202106259087	1619401	3	A	31/03/11	2016-03-31	CL36247	*	N12
17	MBESHU T	7202106259088	1780100	2	A	06/06/12	2017-06-30	CF175499		Q80
18	MBUNDWINI NT	6606025702083	1806352	2	A	22/04/14	2017-07-31	CL37700	*	676, 677
19	MOHANENG MM	5905055946086	1814304	1	A	10/09/14	2018-05-31	CL11176	*	676, 677
20	MOHANENG MM	5905055946087	1804750	2	A	25/04/13	2017-05-31	CL16548		676, 677
21	MOSOMOTHANE TM	2904155147086	507379	6	A	27/02/06	INDEF	CL39532	*	676, 677
22	MTIYA N	5506120723086	1806309	1	A	11/07/13	2017-07-31	CL59948	*	676, 677
23	NOQAYO MG	7105315382085	1815007	0	A	13/06/13	2018-06-30	CL52556	*	676, 677
24	NZIWENI V	7106056472085	1619851	5	A	12/05/11	2016-05-31	CL62506	*	N12
25	RATSHANA K	3602145198081	602125	0	A	04/12/98	INDEF	CL16122		813, 814
26	SONGELWA M	5808085279088	1620231	3	A	14/03/11	2016-03-31	CL16802	*	N12
27	SIKATI NT	6606025702083	1806352	2	A	22/04/14	2017-07-31	CL37700		676, 677
28	SIPHUHLE M	6901018249089	1787102	1	A	05/10/11	2016-03-31	CL60829	*	N12
29	TOBO TB	3904165318080	1811631	2	A	31/07/13	2018-01-31	CL23558	*	676, 677
30	TSHOTSHO BS	6010315379084	1804868	2	A	15/11/12	2017-05-31	CL10994	*	676, 677
31	YENZELA JL	3301016711086	1501072	0	A	08/09/99	INDEF	CL22201	*	676, 677
32	ZENGELE M	7411255638084	1814252	2	A	28/06/13	2018-05-31	CL29031	*	676, 677

KAYAMANDI TAXI ASSOCIATION: OPERATING LICENCES								DATE:	Jun-15	
Nr	Surname and Initials	ID Number	OL Nr	Issue	Status	Issue Date	Expiration	Vehicle	RAS	Routes
33	BALENI LH	5908155722808 7	520928	1	A	12/03/91	INDEF	CL11667	*	LONG DISTANCE
34	MSITSHANA MN	6812070765088	505605	6	A	03/09/13	INDEF	CL37848	*	T46 (LONG DISTANCE)
35	Blank 1									722, 723
36	Blank 2									
37	Blank 3									
38	Blank 4									
39	Blank 5									
40	Blank 6									

ANNEXURE D: OPERATING LICENCE REQUIREMENTS AND ROUTE CAPACITIES

Table 13-13: Operating Licence Requirements and Route Capacities

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Route Information				Data from Surveys					Service Capacity				Operating Licence Requirements					
Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passsengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time inc. stops and turnaround (20%) - min.	Service Capacity (=FxI)	% Utilisation (=G/K)	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Vehicles Operating with OL's (from Number Plate Surveys)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's) (= N-M)	Actual OL's Issued	Over / Under Supply (Based on Actual OL's Issued) (= P-M)	No. Vehicles without OL's (= H-N)	Over / Under Supply (Based on Survey Including Veh. w/o OL's) (= H-M)
Stellenbosch	630, 631, 632, 633, 634, 635 656, 657, 658, 659, 660, 661	Bergzight	Stellenbosch - Idas Valley	17:00 - 18:00	16	246	15	15	25	240	103%	7	8	-1	11	4	7	6
Stellenbosch	636, 637, 665, 666	Bergzight	Stellenbosch - Cloetesville	17:00 - 18:00	16	240	15	15	38	240	100%	11	9	-2	11	0	6	3
Stellenbosch	662	Bergzight	Stellenbosch - Koelenhof	16:30 - 17:30	1	15	1	15	172	15	100%	3	0	-3	11	8	1	-2
Stellenbosch	663	Bergzight	Stellenbosch - Vlottenburg	17:00 - 18:00	5	45	5	15	71	75	60%	4	1	-3	4	0	4	1
Stellenbosch	664	Bergzight	Stellenbosch - Devon Valley	07:00 - 08:00	4	45	3	15	36	60	75%	2	1	-1	4	-1	2	1
Stellenbosch	667	Bergzight	Stellenbosch - Pniel	07:00 - 08:00	No Data	No Data	No Data	15	119	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Route Information				Data from Surveys					Service Capacity				Operating Licence Requirements					
Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passsengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time inc. stops and turnaround (20%) - min.	Service Capacity (=FxI)	% Utilisation (=G/K)	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Vehicles Operating with OL's (from Number Plate Surveys)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's) (= N-M)	Actual OL's Issued	Over / Under Supply (Based on Actual OL's Issued) (= P-M)	No. Vehicles without OL's (= H-N)	Over / Under Supply (Based on Survey Including Veh. w/o OL's) (= H-M)
Stellenbosch	668	Bergzight	Stellenbosch - Kylemore	16:30 - 17:30	10	143	9	15	102	150	95%	17	6	-11	8	-9	3	-8
Stellenbosch	669	Bergzight	Stellenbosch - Somerset West	06:45 - 07:45	4	60	4	15	192	60	100%	13	0	-13	5	-8	4	-9
Stellenbosch	670, 671	Bergzight	Stellenbosch - James Town	08:00 - 09:00	10	152	8	15	61	150	101%	11	2	-9	2	-9	6	-3
Stellenbosch	672	Bergzight	Stellenbosch - Lynedoch	No Data	No Data	No Data	No Data	15	102	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Stellenbosch	673, 674	Bergzight	Stellenbosch - Elsenberg	No Data	No Data	No Data	No Data	15	180	No Data	No Data	No Data	No Data	No Data	3	No Data	No Data	No Data
Stellenbosch	675	Bergzight	Stellenbosch - Jonkershoek	No Data	No Data	No Data	No Data	15	59	No Data	No Data	No Data	No Data	No Data	3	No Data	No Data	No Data
Kayamandi	676, 677, 722, 723	Kayamandi	Kayamandi - Stellenbosch	07:00 - 08:00	28	419	25	15	31	420	100%	15	1	-14	24	9	24	10
Franschhoek	754	Pniel	Pniel - Paarl	07:15 - 08:15	4	47	4	15	195	60	78%	11	2	-9	12	1	2	-7
Franschhoek	755, 873, R13, R14, R15, R16,	Franschhoek	Franschhoek - Paarl	16:30 - 17:30	4	50	4	15	310	60	83%	18	0	-18	30	12	4	-14

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
Route Information				Data from Surveys					Service Capacity				Operating Licence Requirements					
Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passsengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time inc. stops and turnaround (20%) - min.	Service Capacity (=FxI)	% Utilisation (=G/K)	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Vehicles Operating with OL's (from Number Plate Surveys)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's) (= N-M)	Actual OL's Issued	Over / Under Supply (Based on Actual OL's Issued) (= P-M)	No. Vehicles without OL's (= H-N)	Over / Under Supply (Based on Survey Including Veh. w/o OL's) (= H-M)
	N42, A65																	
Kayamandi	813, 814	Kayamandi	Kayamandi - Stellenbosch	No Data	No Data	No Data	No Data	15	40	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Stellenbosch	A88	Bergzight	Stellenbosch - Kuilsrivier	No Data	No Data	No Data	No Data	15	268	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Stellenbosch	F28	Stelmark	Stellenbosch - Klapmuts	No Data	No Data	No Data	No Data	15	287	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Khaymandi	N12	Du Toit	Kayamandi - Bellville	No Data	No Data	No Data	No Data	15	262	No Data	No Data	No Data	No Data	No Data	6	No Data	No Data	No Data
Khaymandi	Q80	Kayamandi	Kayamandi - Lwandle	No Data	No Data	No Data	No Data	15	265	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Khaymandi	Kayamandi / Stellenbosch	Kayamandi	Kayamandi - Stellenbosch	No Data	No Data	No Data	No Data	15	No Data	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Khaymandi	Long Distance	Kayamandi		No Data	No Data	No Data	No Data	15	No Data	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Khaymandi	T46, Long Distance	Kayamandi		No Data	No Data	No Data	No Data	15	No Data	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Stellenbosch	C/S, Staff, Scholars			No Data	No Data	No Data	No Data	15	No Data	No Data	No Data	No Data	No Data	No Data	4	No Data	No Data	No Data
Franschhoek	G57, L15,	Franschhoek		No	No	No Data	No	15	No Data	No Data	No Data	No Data	No Data	No Data	5	No	No Data	No Data

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Route Information				Data from Surveys					Service Capacity				Operating Licence Requirements					
Association	Route Number	Rank	Route Name	Period	No. of Vehicle Trips from Number Plate Survey	No. of Peak Hour Passsengers from Surveys	No. of Vehicles on Route from Number Plate Survey	Vehicle Capacity	Average Return Journey Time inc. stops and turnaround (20%) - min.	Service Capacity (=FxI)	% Utilisation (=G/K)	Required Vehicles With OLS (Weekday) (Based on Journey Time)	Vehicles Operating with OL's (from Number Plate Surveys)	Over / Under Supply (Based on Survey Excluding Veh. w/o OL's) (= N-M)	Actual OL's Issued	Over / Under Supply (Based on Actual OL's Issued) (= P-M)	No. Vehicles without OL's (= H-N)	Over / Under Supply (Based on Survey Including Veh. w/o OL's) (= H-M)
	L61, L67			Data	Data		Data									Data		
Franschhoek	Organised Parties	Franschhoek		No Data	No Data	No Data	No Data	15	No Data	No Data	No Data	No Data	No Data	No Data	1	No Data	No Data	No Data
Stellenbosch		Stellenbosch Station	Stellenbosch - Pniel	07:00 - 08:00	2	3	2	15	No Data	30	10%	No Data	0	No Data	0	No Data	2	No Data
Stellenbosch		Kayamandi	Stellenbosch - Somerset West	06:45 - 07:45	16	245	16	15	No Data	240	102%	No Data	0	No Data	0	No Data	16	No Data
Stellenbosch		Pniel	Stellenbosch - Lynedoch	16:30 - 17:30	4	20	3	15	No Data	60	33%	No Data	0	No Data	0	No Data	3	No Data

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