

Cape Winelands District Integrated Transport Plan 2016 -2021



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Executive Summary

Introduction

This document constitutes the Integrated Transport Plan for the Cape Winelands District Municipality for the five year period from July 2016 to June 2021. This District Integrated Transport Plan (DITP) has been prepared in accordance with the requirements of the National Land Transport Act (NLTA) 2009, and as a designated Planning Authority it is the Cape Winelands District Municipality's responsibility to administer this plan. The DITP contains the the district and local municipalities vision for transport, describes the existing roads and public transport infrastructure and operations, proposes a revised strategy for managing bus and taxi operating licences, discusses the transport needs of the district, and indicates the funding required to address the transport needs.

Local Integrated Transport Plans (LITPs) have also been prepared for four local municipalities in the district, namely Breede Valley, Drakenstein, Langeberg and Witzenberg, as well as, although by a separate process, a Comprehensive Integrated Transport Plan for the Stellenbosch local municipality. The district and local municipalities' Integrated Transport Plans have all been prepared in accordance with the Department of Transport guidelines and minimum requirements for the preparation of Integrated Transport Plans.

Transport Vision and Objectives

Continuity of a vision is necessary to ensure the continued pursuit thereof and for this reason the Transport Vision as stated in the previous Cape Winelands District Integrated Transport Plan (2011-2016) has remained the same, namely "Innovative Mobility". This vision is supported by a mission statement: "A sustainable transport system which provides access for social and economic opportunity". Sustainability should be seen as operations which do not exceed the capacities and capabilities of the natural environment, but which satisfy basic human needs at the same time. This suggests that sustainable transport is a system with low negative environmental impacts yet high positive social value, and which supports efficient economic development. The Cape Winelands District Integrated Transport Plan proposes how to translate these principles into practical applications.

Transport Register

The main factors which influence the demand for transport are population distribution, social needs and economic activity. In the Cape Winelands District, apart from Stellenbosch, Drakenstein municipality has the highest population and Witzenberg municipality has the highest economic growth rate. Population distribution and economic activity are focused around a number of urban centres in each local municipality, namely Paarl and Wellington in Drakenstein, Worcester in Breede Valley, Robertson in Langeberg and Ceres in Witzenberg. There are however a number of smaller towns and settlements within each of these municipal areas, as can be seen in the map on the cover of this report.

The agricultural sector is the dominant economic driver in the Cape Winelands district, and more specifically the horticultural and wine industries. The Western Cape Government has identified the main agricultural produce within the district as wine grapes, with high density concentration along major transport corridors. There are also areas of high agricultural activity such as Witzenberg, with the other areas within the district having moderate activity density. These areas with moderate and high activity densities are along routes connecting main highways.

The public transport modes operating in the Cape Winelands district are minibus taxis and the rail passenger service, while there are some long distance bus services that have stops within the district. These modes are present in all local municipalities, with the exception of Langeberg which does not currently have a rail service. The public transport infrastructure is limited, with a few formal minibus taxi ranks in existence in each local municipality. However, it was also observed in Nduli and Prince Alfred Hamlet (in Witzenberg) and Zolani (in Langeberg), that there are formal minibus taxi ranks which are not being utilised. There are a number of minibus taxi associations in the Cape Winelands district who were consulted with regard to the transport needs of the operators and the passengers.

The non-motorised transport (NMT) infrastructure in the district primarily consists of sidewalks, but a lack of continuity of sidewalks has been identified as a concern. Formal NMT facilities occur sporadically in towns, occasionally linking public

transport embayments. Attention has been given to these concerns in the preparation of a NMT infrastructure framework plan for the district. Implementation of NMT facilities in Ashbury has taken place recently.

Freight transport plays an important role in the movement of agricultural products in the district, but the increasing volumes of long distance heavy vehicles passing through towns situated on main routes, such as Worcester, Robertson and Ashton present problems of traffic congestion, pedestrian safety, noise and air pollution, as well as causing damage to the road surface, requiring more frequent maintenance.

Operating Licence Strategy

The Operating Licence Strategy (OLS) is intended to guide the adjudication of Operating Licence applications within the Cape Winelands area and provide clear guidance to the District Municipality as to which Operating Licence applications should be approved or rejected, and if approved, what conditions should be attached to the approval. It is recommended that the Cape Winelands District Municipality convene an "Operating Licence Recommendations Committee" to evaluate and comment on Operating Licence applications received from the Provincial Regulatory Entity and to co-ordinate responses to the Provincial Regulatory Entity for the local municipalities in its area of jurisdiction.

Transport Needs Assessment

A number of transport needs have been identified within each local municipality through an understanding of the existing situation as well as from consultation with municipal officials and transport operators, and from the public meetings which took place in each local municipality. These needs are aimed at addressing various aspects within the transport sector and include public transport operations and facilities, learner transport, freight movement, non-motorised transport, tourism and the road network.

Funding Strategy

All the local municipalities within the Cape Winelands district, with the exception of Langeberg, have prepared budget estimates for transport projects for the next three financial years. The municipal transport budgets indicate various projects, most of which are road infrastructure projects.

Public and Stakeholder Consultation

Throughout the preparation of this District Integrated Transport Plan stakeholder engagement has taken place through the involvement of the district and local municipal transport officials, as well as Western Cape Government officials who attended the steering committee meetings. Meetings were also held with representatives from the minibus taxi associations in each local municipality. The general public in each local municipality was also consulted through a public participation process which took place in October/November 2015 and their comments are included in this District Integrated Transport Plan.

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List of Abbreviations

AA DT	Average Annual Daily Traffic
CBD	Central Business District
CCT	City of Cape Town
CWDM	Cape Winelands District Municipality
CITP	Comprehensive Integrated Transport Plan
CPTR	Current Public Transport Record
DITP	District Integrated Transport Plan
DTPW	Department of Transport and Public Works
DoT	Department of Transport
EMS	Emergency Medical Services
GIS	Geographic Information System
IATA	International Aviation Transport Association
IDP	Integrated Development Plan
IPTN	Integrated Public Transport Network
IPTNF	Integrated Public Transport Framework
ITP	Integrated Transport Plan
LITP	Local Integrated Transport Plan
LM	Local Municipality
NDP	National Development Plan
NLTA	National Land Transport Act, 2009
NMT	Non-motorised Transport
NPTR	National Public Transport Regulator
OL	Operating Licence
OLS	Operating Licence Strategy
PAH	Prince Alfred Hamlet
PRE	Provincial Regulatory Entity
RNIS	Road Network Information System
SANRAL	South African Nation Road Agency Pty Ltd
SDF	Spatial Development Framework
WCG	Western Cape Government

1 INTRODUCTION

1.1 Background

This report comprises the 5 year Review of the District Integrated Transport Plan 2015/16 – 2020/21 for the Cape Winelands District.

Section 36 of the National Land Transport Act (Act 5 of 2009) requires that all Planning Authorities prepare an Integrated Transport Plan (ITP) covering a 5 year period and updated annually.

This review therefore includes updating the following elements:

- Vision and Objectives
- Current Public Transport Record
- Operating Licence Strategy
- Transport Needs Assessment
- Summary of the Local Integrated Transport Plans
- Funding Strategy and Summary of Proposals
- Public and Stakeholder Consultation

- Local Integrated Transport Plans
 - Transport Status Quo
 - Transport Needs Assessment
 - Transport Improvements Proposal
 - Implementation Budgets and Programmes

The Cape Winelands District includes Drakenstein, Witzenberg, Breede Valley, Langeberg and Stellenbosch local municipalities. Currently, these local municipalities are classified as type 3 planning authorities, with the exception of Stellenbosch which is classified as a type 1 planning authority. For this reason, the Stellenbosch local municipality is required to prepare a Comprehensive ITP (CITP) and the other local municipalities local ITPs (LITPs). The Cape Winelands district municipality is classified as a type 2 planning authority and is therefore required to prepare a District ITP (DITP).

Due to the Stellenbosch municipality being classified as a type 1 planning authority, it will be excluded from the Cape Winelands DITP update, which will only include the executive summary of the Stellenbosch CITP.

Interrelationship between Transport Plans:

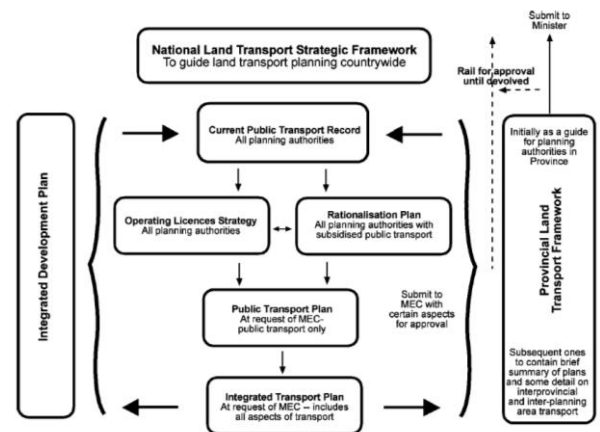


Figure 1-1: Interrelationship between Transport Plans (Source: National Land Transport Transition Act No22 of 2000)

1.1.1 Study Area

As illustrated in Figure 1-2 the Cape Winelands district lies within the Western Cape Province. A full page illustration of the figure can be found in Annexure A.



Figure 1-2 - Western Cape Province

As mentioned previously and illustrated in Figure 1-3 the Cape Winelands district includes the following local municipalities; Drakenstein, Breede Valley, Witzenberg, Langeberg and Stellenbosch.

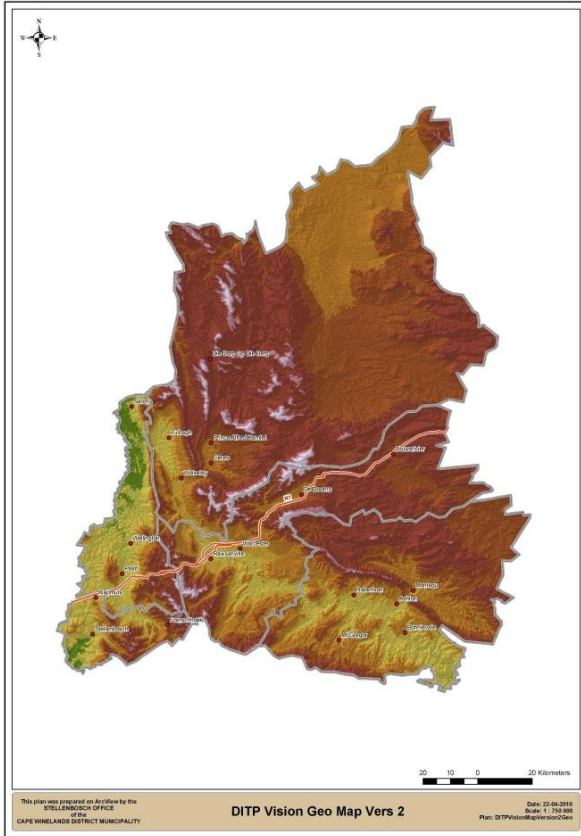


Figure 1-3 - Cape Winelands District Municipality

Drakenstein municipality is considered the most urban of the municipal areas in the study area and this is most likely because it is on the City of Cape Town urban fringe. Witzenberg, Breede Valley and Langeberg are less urban, with the majority of their towns being rural and spatially dispersed within the municipal areas.

1.1.2 Report Layout

This report consists of the following chapters:

- Executive Summary
- Chapter 1: Introduction
- Chapter 2: Vision and Objectives
- Chapter 3: Transport Register
- Chapter 4: Operating Licence Strategy
- Chapter 5: Transport Needs Assessment
- Chapter 5: Summary of the Local Integrated Transport Plans
- Chapter 7: Funding Strategy and Summary of Proposals
- Chapter 8: Public and Stakeholder Consultation

This report consists of the following Annexures containing supporting information:

- Annexure A: Figures
- Annexure B: Tables
- Annexure C: Stakeholder consultation

1.2 Cape Winelands Transport Institutional and Organisational Structure

Figure 1-4 illustrates the organisational structure of the Cape Winelands District Municipality.

The Public Transport Planning and Regulations department in the District consists of a Deputy Director: Public Transport and a transport planner. This unit has been responsible for procuring and managing the DITP review process for the Cape Winelands District Municipality.

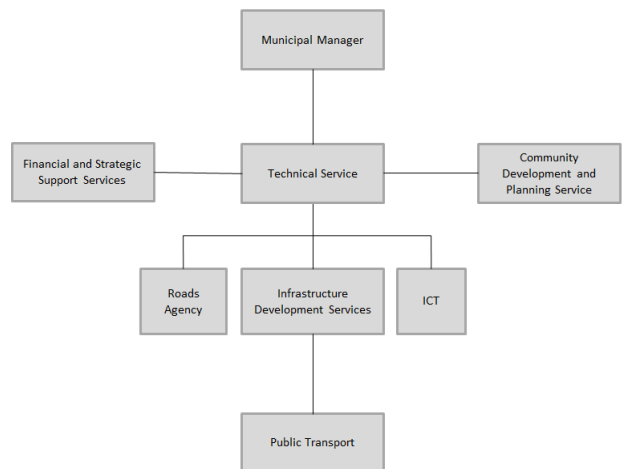


Figure 1-4: Institutional and Organisational Structure

2 VISION, GOALS AND OBJECTIVES

There are a number of overarching policies, visions and strategies within National and Provincial government that are relevant to the Cape Winelands District Municipality and local municipalities. In addition, there are District Municipality documents that inform planning in general and transport planning in particular. Sustainability is also an important component of a transport vision and is addressed below.

2.1 Sustainability in transportation

There are three components to sustainability, namely the natural environment, social activity and economic development. These three components of 'sustainability' should not be seen as being in conflict over the same resources. Instead, the focus should be on the interdependencies between the components (each being dependent on the *full extent and functionality* of the others). The interdependence implies that trade-offs between the components will result in compromised functionality, with subsequent detrimental knock-on effects in the other components.

Accordingly, sustainability should be seen as an operational space which does not exceed the capacities and capabilities of the natural environment, but which fully satisfies basic human needs at the same time. This suggests that sustainable transportation is a system with low negative environmental costs yet high positive social value, and which supports resource efficient economic development.

These principles, translated for practical application in the Cape Winelands District, require the following:

Lowering the carbon intensity of transport, especially freight transport

One of the fundamental concerns relating to transportation is its reliance on transport modes and infrastructure with large greenhouse gas footprints. A path towards more sustainable transportation therefore has to include efforts at reducing the relative carbon intensity of both the infrastructure and operational activities of transportation systems. In the Cape Winelands, the focus will be on finding innovative carbon-efficient ways of providing mass public transport to dispersed rural communities and low density urban

settlements, as well as ways to reduce the reliance on road-based freight. Additionally, the District needs to participate in regional and national debates regarding the interprovincial movement of freight and people along the main national corridors.

Improvement in the rural coverage of public transport networks

Access to transport networks is a crucial determinant of human welfare as it represents a crucial connection between people and employment opportunities, social services, recreational facilities etc. With its extensive rural hinterland, the Cape Winelands District is faced with a massive challenge to provide public transport at affordable rates to dispersed and often poor communities. This calls for innovative combinations of old (e.g. non-motorised) and new (e.g. renewable energy, on-demand services, mobile communications) technology and highly efficient network operations.

Integrated public transport systems within towns

As important as connecting rural communities with employment opportunities and social services, is the need to elevate the level of public transport within towns. Towns in South Africa clearly evidence the legacy of segregation planning of the apartheid era. As a result, the circulation of people between active business and social activities, and between places of residence and employment, is inefficient and places a particular strain on the lives and finances of the poor or disadvantaged social groups. To counteract this, an affordable public transport system with adequate schedules and levels of service needs to be instituted in each town. As with the rural systems, it will need to bring an innovative mix of new and existing technologies together.

The internalisation of social, economic and environmental costs into the design and construction of transportation infrastructure

Approaching the development of transportation systems with a cradle-to-grave perspective will ensure that previously overlooked or externalised impacts on people, the economy and the environment are reduced. For example, achieving an extended life-span that reduces the long term maintenance or replacement cost might cost more initially, but brings about long term economic sustainability. As a matter of fact, a new perspective could even result in initial cost savings as more integrated solutions are found that utilise renewable energy, recycle water and materials, and reduce the amount of waste being disposed of. Looking after the

natural environment, people and the local economy will, over time, ensure greater resilience in the face of adverse conditions.

Realisation of local benefits

An integrated transportation system should be about more than just providing people with a means to move people and goods from point A to point B. Investment in transport infrastructure and transportation systems should bring about lasting local benefits that stimulate the local economy and improve the overall welfare of communities. This can be realised by involving local communities in transportation development projects through sourcing of local labour, labour intensive construction methods, social outreach, skills transfer and project detail that provide local scale transportation benefits such as improved pedestrian movement as a spin-off from infrastructure aimed at higher order transport modes.

2.2 National and Provincial Guiding Visions and Strategic Goals

National

Poor access to transport in the rural areas of developing countries constrains economic and social development and contributes to poverty.

According to the Constitution of South Africa, local government has been mandated to “carry out a number of developmental duties” and expresses this mandate as follows:

- Provide democratic and accountable government for local communities
- Provide services in a sustainable manner
- Promote social and economic development
- Promote a safe and healthy environment
- Encourage participation in government

National Development Plan (2011)

The National Development Plan (NDP) provides a vision of South Africa that is without poverty and without inequality by 2030. The NDP proposes working towards this vision by including all members of society to actively contribute to achieving this vision. The objectives of the NDP are:

- Strengthening the links between the economic and social strategies
- An effective and capable government

- Redressing the injustice of the past effectively
- Faster economic growth and increased investment and employment
- Rising standards of education, a healthy population and effective social protection
- Leadership from all sectors in society
- Collaboration between private and public sectors
- An effective and capable government

Provincial

Western Cape Government Strategic Goals

The Provincial Strategic Goals (2015) indicate that the Western Cape Government aims 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 provide 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 Plan for 2015/15 – 2019/20 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

2.3 Cape Winelands District Municipal Vision

A number of informants have previously been used to develop a vision and mission for the Cape Winelands District Municipality, including a range of policy documents. For the full vision as stated in the IDP, refer to Figure 2-1. A summary vision is stated as “A unified Cape Winelands of excellence”. The CWDM mission reads, “All structures of the Cape Winelands co-operate together towards effective, efficient and economically sustainable development”.

The Cape Winelands mission focuses on a collaborative effort to work towards a more sustainable district.

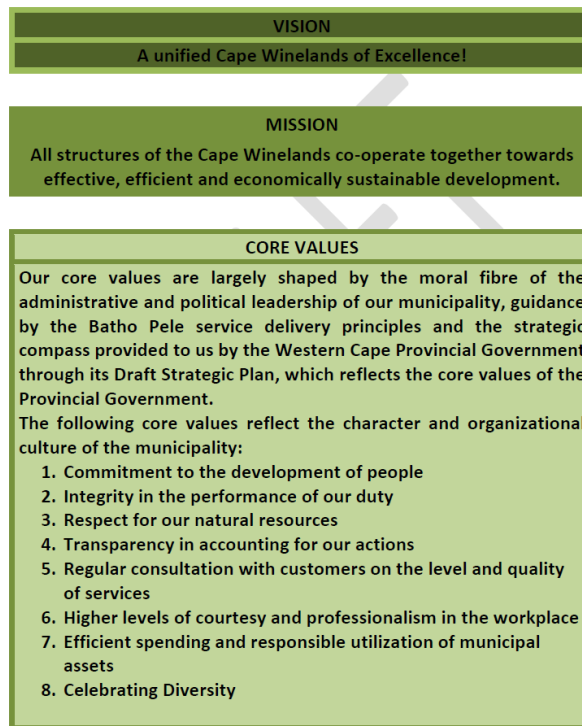


Figure 2-1: Cape Winelands District Municipality Vision, Mission and Core Values (Source: IDP 2014 – 2015)

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

- To maintain 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

2.4 Cape Winelands Transport Vision 2011-2016

The previous Cape Winelands DTP stated the vision for transport as:

“Innovative Mobility”

And the Cape Winelands transport vision was further supported by the following mission statement:

“A sustainable transport system which supports the needs of social and economic opportunity”

The findings of the current DITP suggest no reason to amend the vision and mission, and it is noted that these should not be changed frequently without evidence-based reasoning. The vision of the Cape Winelands needs to be informed by the context and how people move.

For a detailed interpretation of the vision for transport, refer to the DITP 2011-2016, section 2.3, which provides analysis of what was working and what was not working in the district as an informant to the vision.

Since the previous vision statement a number of projects have been conducted with the intention of moving towards this vision.

This includes:

- Drafting the Cape Winelands Integrated Public Transport Network Framework
- Updating the Non-motorised Transport Masterplan Framework
- Updating the Safer Journeys to Schools report; and
- Constructing a number of projects to improve transport within the district.

2.5 Strategic Framework

A number of studies have been carried out to inform planning by different transport modes, as summarised below. Some of these are covered in more detail elsewhere in this report, but brief summaries are provided here as informants to the vision for the district.

Safer Journeys to Schools

Owing to increased non-motorised transport (NMT) and learner travel awareness generated by the National Land Transport Transition Act (NLTTA) and the development of the provincial NMT Strategy for the Western Cape Province, the Cape Winelands District Municipality (Cape Winelands) realised the need for a comprehensive policy framework that would address the travel needs of learners. Pendulum Consulting was subsequently appointed by Cape Winelands to develop a policy framework for learner travel in the Cape Winelands.

The primary objective of this policy document is to develop a framework referred to as the Safer Journeys to Schools in the Cape Winelands, to facilitate the implementation of learner travel improvement projects at schools in the Cape Winelands.

Vision:

The vision developed for this policy is to **“improve and create access to opportunities through education”**.

Mission:

This can be accomplished through improving the journey to school by providing a safe and comfortable link or connection between home and school.

Objectives:

Objectives in support of the vision and the mission are as follows:

- Improve the level of service (including transport operational level of service, as well as the coordination of transport services) learners and parents are currently experiencing.
- Improve the environment that learners move within between home and school
- Improve comfort and convenience experienced by learners while undertaking the journey between home and school.
- Improve road safety conditions along the route

Areas of Interventions and Strategies

Areas of intervention as listed below and supportive strategies were identified. Actions or programmes in support of the strategies would assist in realising the objectives.

- Engineering/ environmental
- Education, communication and awareness
- Transport service delivery
- Institutional integration
- Traffic law enforcement
- Evaluation and Monitoring

NMT Masterplan Framework

A key transport challenge in most rural districts of SA, including Cape Winelands, is not only the widely distributed nature of towns and the opportunities they provide, but also the low intensity of land uses within towns. These two factors negatively impact on both public transport and NMT (as a mode in its own right and as a feeder to public transport).

IPTN Framework

Currently there is no

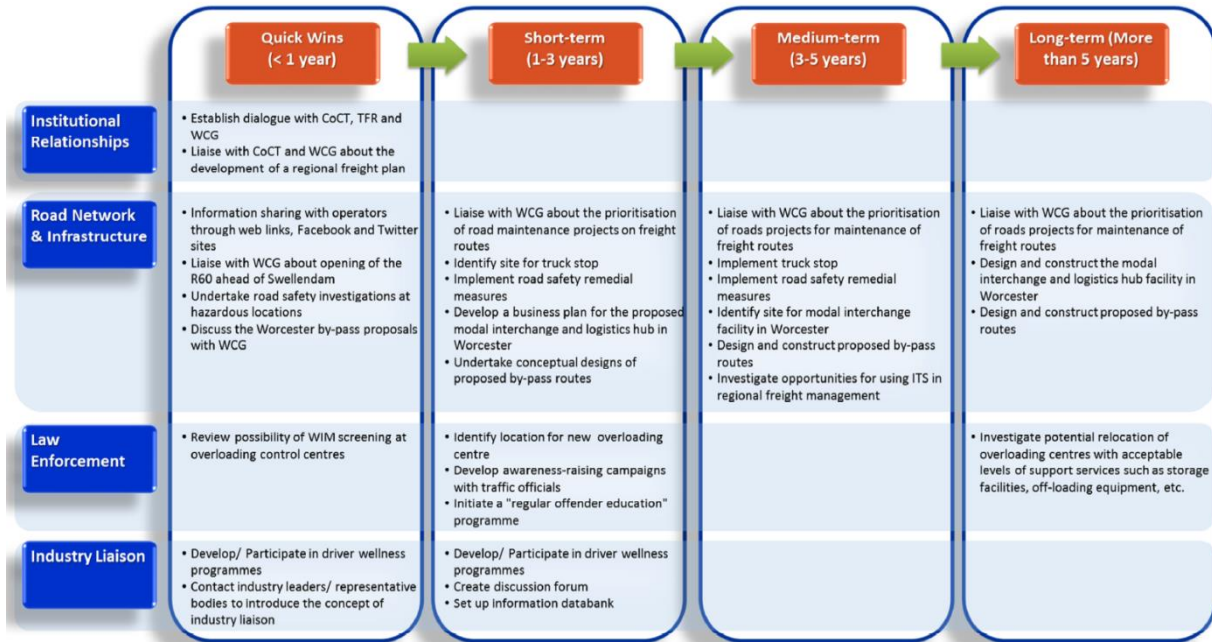


Figure 2-2: Freight Strategy Proposed Transport Improvements

comprehensive IPTN for the district, but a framework has been prepared in response to needs identified in the previous DITP.

Freight Strategy

The freight strategy as identified in the previous CWDM ITP (2010 - 2015) was prepared in 2011. This freight strategy was a desktop study which indicated that engagement with the stakeholders was required. These engagements took place and transport improvements proposed. These transport improvements are on various institutional levels and over short to long term timeframes.

As indicated the long term improvements include engagement with WCG regarding prioritisation of roads projects for maintenance of freight routes, design and construction of the modal interchange and logistics hub facility in Worcester, and design and construction of proposed by-pass routes. The engagement also included investigation of the relocation of overloading centres with acceptable levels of support services such as storage facilities, off-loading equipment etc.

3 TRANSPORT REGISTER

3.1 Introduction

This chapter illustrates the current status quo of transport within the Cape Winelands District Municipality. This chapter will summarise the Current Public Transport Record that was prepared for the CWDM DITP update, and illustrate information about public transport and general traffic volumes.

3.2 Spatial Development Framework

The Cape Winelands District Municipality is primarily rural with its main economic driver being the agricultural industry and specifically the horticultural industry (including fruits, vegetables, livestock and dairy products). The main towns within the district, such as Paarl, Wellington, Robertson, Worcester and Ceres, have arisen in support of the rural economy. Due to the geographic and demographic makeup of the district, the transport system plays an important role in overcoming the spatial and income divide. The NMT Masterplan Framework (2010) identified a number of functional clusters primarily based on the geographic layout of the district and where the main towns are located. The updated NMT Masterplan Framework (2015) refined these functional clusters by understanding the functional relationship between the towns and grouping the towns accordingly. The improvement of transport within these functional clusters is important to minimise the impact of the spatial structure on daily travel, to allow for better access to opportunities.

The proximity to the City of Cape Town (CCT) also allows for economic interaction to take place between the district and the CCT. There is currently a strong functional (economic) relationship between the Cape Winelands and the CCT.

The CWDM IPTN Framework (2013) illustrates a number of key spatial challenges for each of the local municipalities. (see Table 3-1)

Table 3-1: Key Spatial Challenges

Local Municipality	Key Spatial Challenges
DRAKENSTEIN	Lack of available land for transport and related infrastructure (Huguenot Station Precinct).
	No park-and-ride facility at Huguenot Station.
	Poorly defined transport and public spaces in Paarl Central Business District
	Key nodes (Wellington and Paarl) do not adequately support NMT.
	Poor transport-land use integration in Paarl CBD.
STELLENBOSCH	Lack of integrated settlements within municipality.
	Dispersed rural settlements.
	Derelict and unutilized rail infrastructure (Franschhoek rail connection).
BREEDE VALLEY	Inter-city bus facilities are poorly located.
	Poor transport-land use integration in Worcester CBD.
	Worcester CBD does not adequately support NMT.
	Dispersed and non-integrated public transport facilities or ranks within Worcester CBD (i.e. rail, long-distance bus, taxi).
WITZENBERG	Public transport services and facilities are non-existent or limited in rural areas
	Lack of integrated settlements, particularly at Ceres.
	Dispersed public transport facilities within Ceres CBD.
LANGEBERG	Poorly located and underutilized public transport facilities at Ceres.
	Dispersed public transport facilities or ranks at Robertson CBD – no integration
	Dispersed rural settlements with vast distances between them.
	Poor NMT infrastructure.
	Public transport facilities are limited within the rural settlements (McGregor, and Montagu)

The key findings of the Cape Winelands SDF (2009/10) suggest that the current development path is not sustainable and that spatial restructuring is only possible through investment in infrastructure.

The SDF indicates that each local municipality's growth is different in terms of population and in the economic and revenue generating sectors. This creates different challenges amongst the municipalities. The SDF suggests 30 key spatial proposals which may address these challenges. Of these, two have been identified as key to transport. One is that transport corridors containing both road and rail routes should be developed as primary freight and passenger routes and the other are to increase the ability to commute between higher order and lower order towns.

The SDF findings and key challenges identified in the IPTN framework suggest that different considerations are necessary to plan for each of these local municipalities as the challenges may be similar but the context within which they occur is somewhat different.

3.2.1 Population density and distribution

According to the National Census 2011, as illustrated in Table 3-2, the total population of the Cape Winelands district is approximately 787 490 persons, the majority of which reside in the Drakenstein local municipality. Drakenstein also has the highest population density of the towns in the study area, with the majority of the LM residents residing in Paarl and Wellington.

Table 3-2 - Population within the Cape Winelands District

Local Municipality	Area (km ²)	Total Pop.	Pop. density ¹	No of Households
Drakenstein	1538	251262	163	59774
Witzenberg	10753	115946	11	27419
Breede Valley	3833	166825	44	42527
Langeberg	4518	97724	22	25125
Stellenbosch	831	155733	187	43 420

¹ Density: number of persons per square km

Total	21473	787490	427	198265
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3.2.2 Employment levels and economic activity

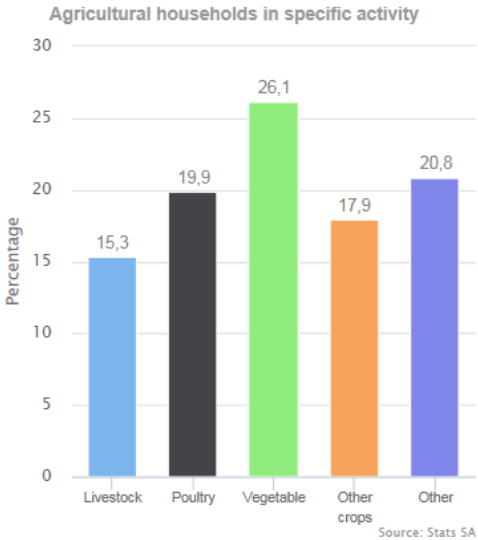
Table 3-3 illustrates the percentage of persons unemployed within each local municipality. It is evident that the local municipality with the lowest growth rate also has the second highest unemployment rate. Conversely, the local municipality with the lowest unemployment rate has the highest growth rate. It is also evident that there is a high youth unemployment rate within the district.

The Western Cape provincial unemployment rate is 24.5% (fourth quarter of 2014) and was the lowest unemployment rate amongst the provinces. Within the provincial context the local municipalities appear to have an unemployment rate lower than that of the province.

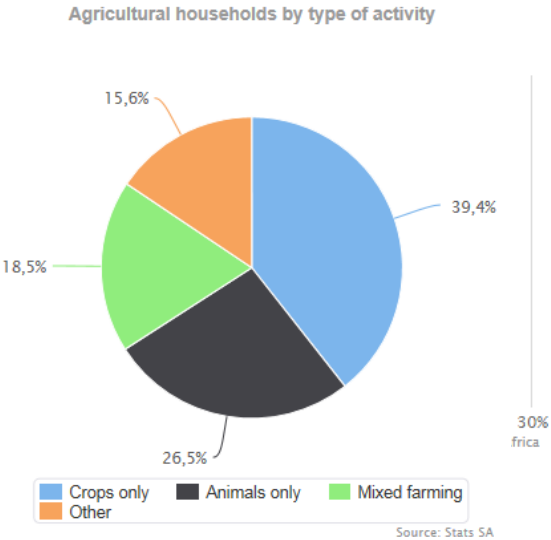
Table 3-3: Unemployment rates within the Cape Winelands District

Local Municipality	Unemployment rate	Youth unemployment	Growth rate
Drakenstein	17.6%	24.6%	2.56%
Witzenberg	7.6%	9.9%	2.64%
Breede Valley	14.4%	20.2%	1.31%
Langeberg	11.3%	15.1%	1.79%

The information illustrated in the figures² below indicates that the main driver of the Cape Winelands economy is the agricultural sector, specifically in vegetable crops.



**An agricultural household may engage in more than one agricultural activity



**An agricultural household may not fall under more than one agricultural activity

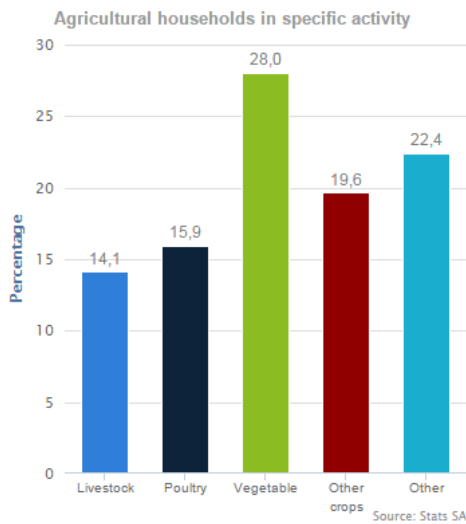
Figure 3-1: Agricultural Statistics - Breede Valley

Figure 3-2: Employment and Household Income - Breede Valley

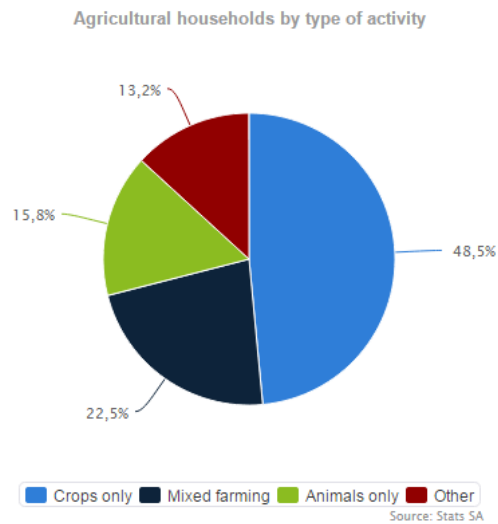
Figure 3-1 illustrates the agricultural households in a specific activity as well as by type of activity. It is evident from this that a large portion of the activities is in crops. This form of agriculture is the most labour intensive and is a source of employment to the low skilled labour pool.

Figure 3-2 illustrates the number of employed persons as well as the household income. It is evident from these figures that nearly a quarter (22.2%) of households averages an income between R19 601 and R38 200. It is also evident that 12% of households have no income.

² Figure 3-1 to Figure 3-8 has been sourced from Statistics South Africa



**An agricultural household may engage in more than one agricultural activity



**An agricultural household may not fall under more than one agricultural activity

Figure 3-3: Agricultural Statistics – Drakenstein

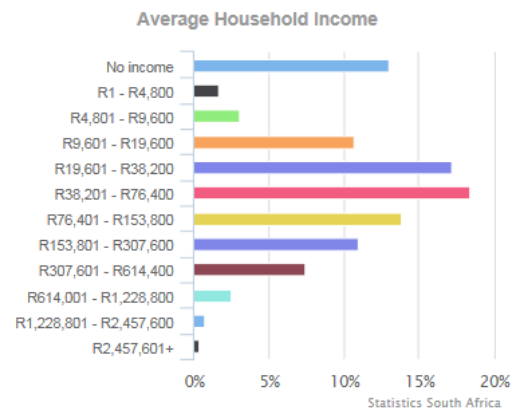
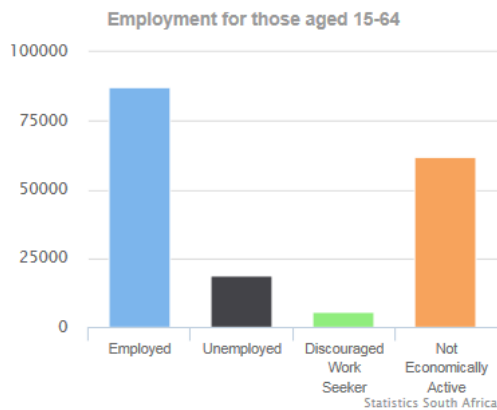
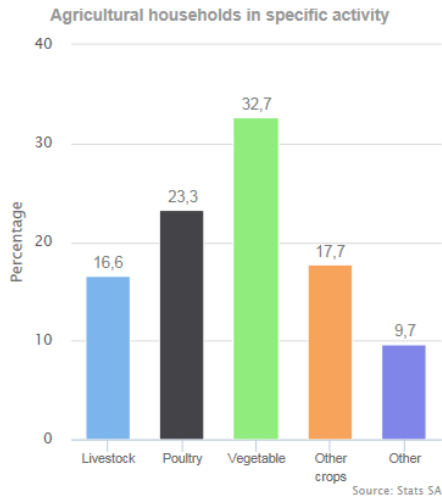


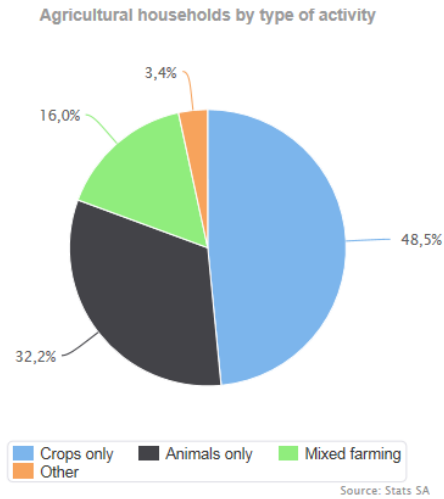
Figure 3-4: Employment and Household Income – Drakenstein

Figure 3-3 illustrates the agricultural households in a specific activity as well as by type of activity. It is evident from this that just under 50% of activity is in crops only.

Figure 3-4 illustrates the number of employed persons as well as the household income. It is evident from these figures that 18.4% of households average an income of between R38 201 and R76 400 per annum. It is also evident that 13% of households have no income which is the highest amongst the local municipalities within the Cape Winelands district.



**An agricultural household may engage in more than one agricultural activity



**An agricultural household may not fall under more than one agricultural activity

Figure 3-5: Agricultural Statistics – Langeberg

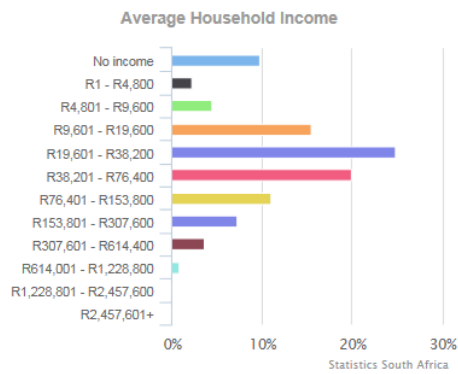
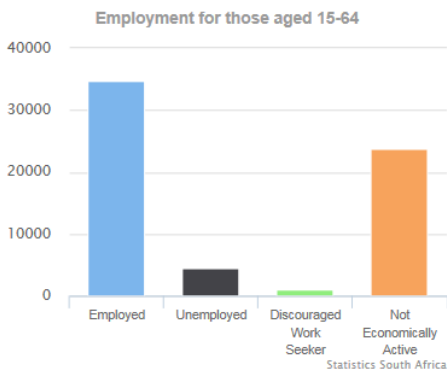
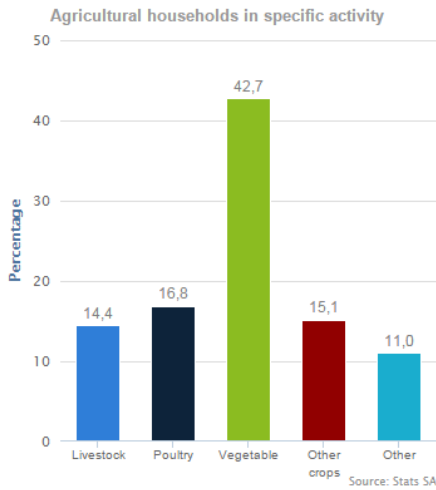


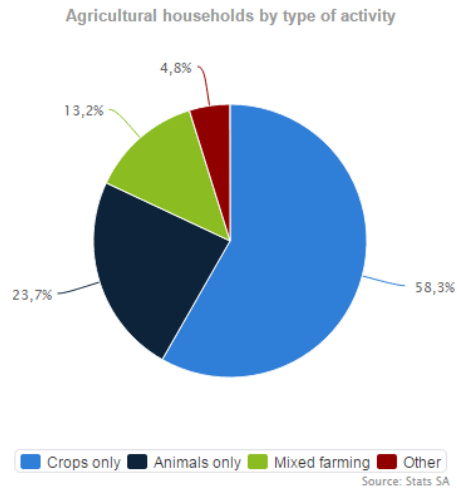
Figure 3-6: Employment and Household Income – Langeberg

Figure 3-5 illustrates the agricultural households in a specific activity as well as by type of activity. It is evident from this that just under 50% of activity is in crops only.

Figure 3-6 illustrates the number of employed persons as well as the household income. It is evident from these figures that nearly a quarter (24.9%) of households average household income of between R19 601 and R38 200. It is also evident that 9.7% of households have no income.



**An agricultural household may engage in more than one agricultural activity



**An agricultural household may not fall under more than one agricultural activity

Figure 3-7: Agricultural Statistics – Witzenberg

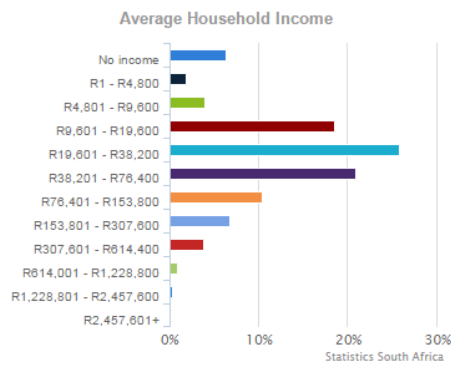
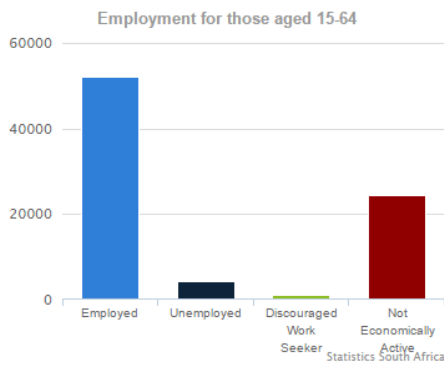


Figure 3-8: Employment and Household Income – Witzenberg

Figure 3-7 illustrates the agricultural households in a specific activity as well as by type of activity. It is evident from this that the majority of activity is in crops only.

Figure 3-8 illustrates the number of employed persons as well as the household income. It is evident from these figures that the majority (25.8%) of households average an income of between R19 601 and R38 200. It is also evident that 6.4% of households have no income.

The figures above indicate that the majority of produce is from the agricultural sector, which is primarily transported on the road network due to the lack of alternative transport options.

The income levels of the households within the municipality suggest that their affordability is limited and would therefore make use of either NMT or public transport.

3.3 Strategic Transport Corridor

3.3.1 Regional Development Corridors

According to the Western Cape SDF 2014, the rural economy is undergoing transformation as a result of both financial / economic factors, and a policy thrust to diversify rural activity. Government support of rural entrepreneurs can be expected to increase travel on the existing links between the Cape Winelands and Cape Town, and between the Cape Winelands and inland destinations. A rural development corridor is identified linking Ceres, Worcester, Robertson and Swellendam, which has the potential to increase road-based transport in and out of the Cape Winelands. In the long term this has the potential to alter public transport patterns, but this has not been observed yet.

3.3.2 Transport, Activity development and Agricultural corridors

According to the Western Cape Provincial Spatial Development Framework³ agriculture is the most space extensive economic activity and underpins the economies of all districts outside of Cape Town (within the Western Cape).

It is evident from Figure 3-10 and Figure 3-11 that the Cape Winelands district economy is focussed on the agricultural sector. These figures illustrate that the main agricultural areas are situated along and between the main transport corridors i.e. the N1 and N2.

The main agricultural produce within the district is wine grapes, with medium to low density wine cellars within the district with areas of high density concentration along major transport corridors. There are also areas of high activity density such as Witzenberg, with the other areas within the district having moderate to high and moderate activity density

These areas with moderate and high activity densities are along routes connecting main highways. This suggests that a large number of vehicles transport agricultural input and output between the N1 and N2 via the R60, R62, R43 and R45. The agricultural inputs are therefore also transported along these corridors. Rail freight movement also takes place within the district. Agricultural produce is transported via rail between CCT and Ceres and areas east of CCT.

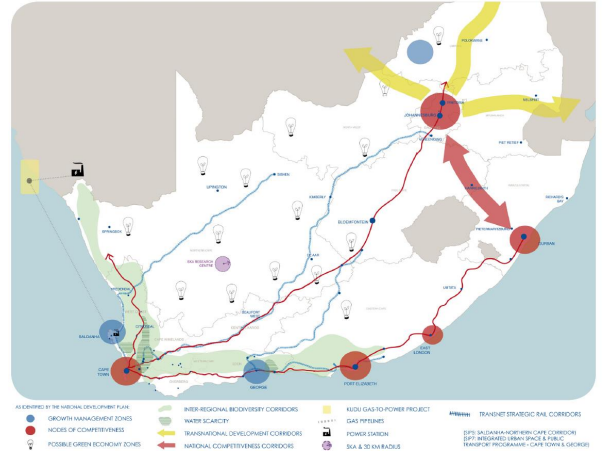


Figure 3-9: Inter- and Intra- Provincial Spatial Initiatives based on NDP and other National Strategies

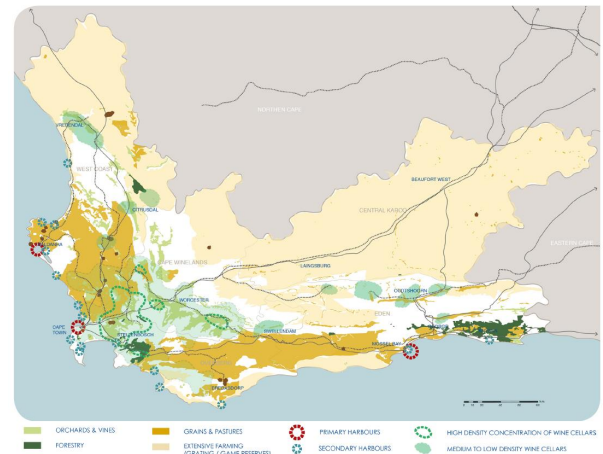


Figure 3-10: Western Cape Province - Primary Sectors (Agriculture, Fishing, Forestry and Mining)

³ Draft for Public Comment, October 2013

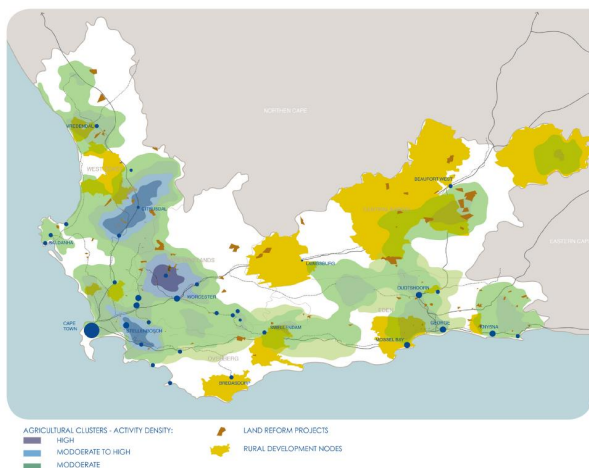


Figure 3-11: Western Cape Province - Locality of Agricultural clusters, Land reform projects and CRDP nodes

3.4 Public Transport Services

3.4.1 Overview of the Public Transport Operations

Within the district are a number of public transport operations, facilities and operators. The primary mode of public transport is minibus taxi as well as limited rail and long distance bus services. The majority of public transport infrastructure provided is for the minibus taxi in the form of formal ranks and can be seen in the four local municipal areas. In towns where there is limited public transport infrastructure, the minibus taxi operators make use of shopping centres/ stores parking areas.

Public transport operations are also concentrated at peak times, with the majority of public transport trips taking place in the morning.

In the main towns of each local municipality there are operations that take place within the town and between neighbouring towns. In the more isolated towns the public transport operations are less frequent and may operate once a week only.

It was also found that in Nduli, Zolani and Prince Alfred Hamlet the existing public transport facilities are not being utilised during the peak, and that operators are more prone to providing a door-to-door service. This may be a result of competition amongst operators, whereby operators are not willing to wait at the public transport

facilities for commuters but rather pick them up in order to avoid loss of potential income.

Modal Split

As discussed in the Cape Winelands CPTR, the inbound modal split for road based transport is indicated in a number of tables below. These tables illustrate that the main mode of inbound transport is light vehicles. In some instances the public transport modal share is relatively high as in the case of Montagu, Ceres and Robertson.

Breede Valley Local Municipality

Table 3-4 - Touwsriver inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
88.2%	1.8%	10.0%

Table 3-5 - De Doorns inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
80.9%	3.7%	15.3%

Drakenstein Local Municipality

Table 3-6 Paarl inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
86.5%	1.3%	12.2%

Langeberg Local Municipality

Table 3-7 - Robertson inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
60.9%	8.4%	30.7%

Table 3-8 - Montagu inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
47.2%	3.9%	48.9%

Table 3-9 - Ashton inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
84.6%	2.7%	12.6%

Witzenberg Local Municipality

Table 3-10 - Ceres inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
37.8%	3.8%	58.4%

Table 3-11 - Tulbagh inbound modal share (weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public transport (MBT + Bus)
74.0%	4.2%	21.8%

Regional Modal Splits

The road based modal share for the Cape Winelands district is illustrated in Table 3-12.

Table 3-12 - Regional Modal Share (Weekday, 06:00 - 08:00)

Light vehicle	Heavy vehicle	Public Transport (MBT + Bus)
60.4%	2.8%	36.8%

3.4.2 Minibus taxi operations

Routes and ranks

With the exception of Drakenstein, the majority of minibus taxi operations are inter-town i.e. most trips are between towns and not within towns. This is mainly due to the spatial layout of the local municipalities, with towns being divided such that NMT is not a viable option for commuting between towns, and the size of towns being

such that they do not provide enough opportunities for them to be self-contained. For this reason most trips cover long (>5km) distances. It also suggests that commuters do not reside close to their places of employment opportunities.

A large number of the legally operating routes in Drakenstein are internal, with most taking place in Paarl and Wellington.

3.4.3 Rail

The rail operations in the district are both passenger and freight operations. The passenger rail services are operated by Metrorail and Shosholoza Meyl, whereas the freight operations are operated by Transnet Freight Rail.

In terms of passenger operations, a number of services operate in Drakenstein and there is a daily service from the CCT to parts of Witzenberg and Breede Valley. Langeberg however is the only local municipality which does not have a passenger rail service operating.

The Shosholoza Meyl, a long distance rail operator, provides a rail service between CCT CBD and Johannesburg. This long distance service departs from CCT on specific days in the week. The service operates in Drakenstein and Breede Valley, and continues further north-east to Johannesburg.

The freight rail operations take place on a daily basis with freight trains operating on the same railway lines as the passenger operations with the exception of a freight only line extending east of Worcester through the Langeberg municipal area.

More detailed information of the passenger rail services and timetables can be found in the Current Public Transport Record for the Cape Winelands District.

3.4.4 Minibus Taxi Associations consulted

As discussed in the CPTR the minibus taxi association as indicated in Table 3-13 were consulted and provided input into the data collection process.

Table 3-13 Minibus taxi associations consulted

Local Municipality	Stakeholders engaged
Witzenberg	Ceres Taxi Association
	Nduli Taxi Association
Drakenstein	Huguenot Taxi Association
	U.T.A
	Paarl United Taxi Association
	Wellington Taxi Union
	CATA
	CATA Boland
	Franschhoek Taxi Association
	Paarl Alliance Taxi Association
	Robertson Taxi association
Montagu Taxi Association	
Langeberg	Worcester United Taxi Association
	De Doorns Taxi Association

3.5 Public Transport Infrastructure

3.5.1 MBT Transport Facilities

There are a number of formal and informal minibus taxi facilities within the district, some of which are well utilised and others which are not currently being utilised.

More detail on the public transport infrastructure can be found in the CPTR document.

The following formal ranks within the CWDM are not being utilised:

- Prince Alfred Hamlet formal minibus taxi rank
- Nduli formal minibus taxi rank
- Zolani formal minibus taxi rank

The condition and type of facilities available at the formal and informal minibus taxi ranks differ significantly. Some formal facilities have a paved surface, shelter for vehicles and passengers, seating and ablution facilities, whereas other facilities have a paved surface and shelter for vehicles only.

Most of the ranks rely on street lighting to provide the light while in other areas minibus taxis make use of designated parking space at shopping centres (such as Shoprite and Pick n Pay parking in Robertson and the Worcester Mall parking facility in Worcester).

3.5.2 Bus Transport Facilities

There are currently three long distance commercial bus services that operate through the Cape Winelands district, namely:

- Greyhound
- Translux Bus
- Intercap

All three of these operators primarily travel on the national routes (the N1 and N2) between major city such as Cape Town, Johannesburg, Pretoria and Durban. These operators also offer variations of trip chains, for example from Cape Town via Bloemfontein to Durban, or from Cape Town via Port Elizabeth to Durban.

Greyhound operates between Cape Town and Durban and Pretoria. The bus therefore operates in Paarl, Worcester, Touwsriver and Stellenbosch. The pick-up/drop-off locations in these areas are:

Paarl Pick-up point:	Monument Shell, Cnr Main and South Street
Worcester Pick-up Point:	Breede Valley City
Touwsriver Pick-up Point:	Loganga Karoo Lodge, C/o Jane and Volschenk Streets
Stellenbosch Pick-up point	Merriman Avenue (opposite Neelsie)

TransLux Bus operates between Cape Town and Durban, East London and Pretoria. The bus therefore operates in Stellenbosch, Paarl, Worcester, Ashton and Robertson. The pick-up/ drop-off locations in these areas are:

Paarl Pick-up point:	Shell Garage, c/o Main and South
Worcester Pick-up Point:	Shell Ultra City
Touwsriver Pick-up Point:	Kom Kyk Motors
Stellenbosch Pick-up point	Stellenbosch Station

Figure 3-12 illustrates the routes on which the Translux Bus operates.



Figure 3-12: Translux Bus Route Map

Intercape operates between Cape Town and Port Elizabeth, Umtata, Durban and Pretoria. The bus therefore operates in Stellenbosch, Paarl, and Worcester. The pick-up/ drop-off locations in these areas are:

Paarl Pick-up point	Monument Motors, C/o Suid Street and Main Street (Shell Garage)
Stellenbosch Pick- up Point	Merriman Ave bus stop under foot bridge (Taxi drop off near Neelsie)
Worcester Pick-up point	Shell Ultra City

Figure 3-13 illustrates the routes on which Intercape currently operates.

The timetable with relevant information for the various routes served by each of the long distance bus operators can be found in the CPTR report.



Figure 3-13: Intercape Bus route map

3.5.3 Rail Transport Infrastructure

It has been noted that the Gouda railway station has been upgraded recently.

The table below summarises the information pertaining to the active railway stations within the district.

Table 3-14: Passenger Railway information

Town	Public Transport facility type	Location
Goudini	Railway Station	Latitude 33°36'28.00"S Longitude: 19°19'0.07"E
Channoves	Railway Station (not currently being used)	Latitude 33°37'32.08"S Longitude: 19°22'32.19"E
Worcester	Railway Station	Baring St, Worcester
Paarl	Paarl Rail Station	C/o Railway and Station St
Paarl	Huguenot Rail Station	C/o Huguenot and Klein Drakenstein Rd
Paarl	Dal Josafat Rail Station	Dommedaris St
Paarl	Mbekweni Rail Station	Dommedaris St (Mbekweni)
Wellington	Wellington Rail Station	Stasie Rd
Malan	Malan Rail Station	Latitude: 33°34'44.00"S Longitude: 18°58'59.08"E
Soetendal	Soetendal Rail Station	Latitude: 33°30'33.22"S Longitude: 18°58'54.17"E
Hermon	Hermon Rail Station	Latitude: 33°26'18.82"S Longitude: 18°58'3.96"E

Town	Public Transport facility type	Location
VoelMei	Voelvrei Rail Station	Latitude: 33°21'49.11"S Longitude: 19° 1'0.13"E
Gouda	Gouda Station	Stasie St
Tulbagh	Tulbagh Railway Station	Latitude: 33°19'14.19"S Longitude: 19° 5'59.95"E
Artois	Artois Railway Station	Latitude: 33°22'8.87"S Longitude: 19° 9'53.56"E
Wolseley	Wolseley Railway Station	Piet Retief St, Wolseley
Romans River	Romans River Railway Station	Latitude: 33°28'25.58"S Longitude: 19°12'6.68"E
Bree River	Bree River Railway Station	Latitude: 33°31'30.00"S Longitude: 19°12'29.77"E
Botha	Botha Railway Station	Latitude: 33°34'1.33"S Longitude: 19°15'21.70"E

3.6 Roads and Traffic

3.6.1 Major Road Network and condition

Provincial Roads

The condition of the provincial roads was obtained from the Western Cape Government and is illustrated in figure Figure 3-14 and Figure 3-15 below – a larger figure can be found in Appendix A.

It appears that the paved road network is primarily in good – very good condition, however the majority of the gravel road network appears to be fair to poor condition.

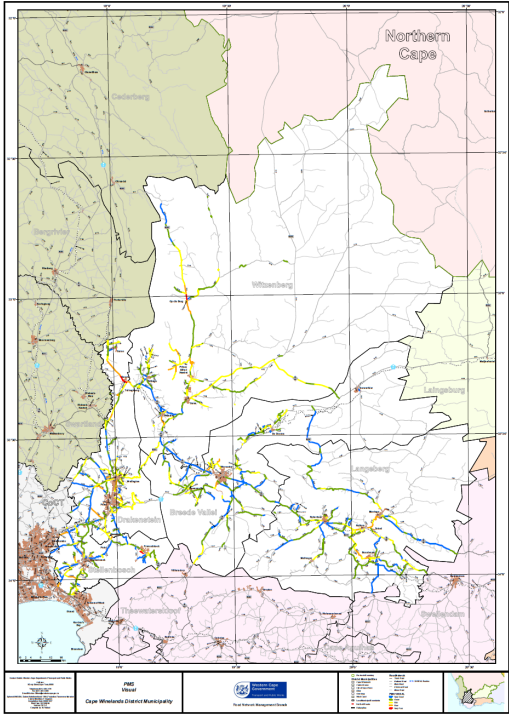


Figure 3-14 Paved Road Condition of Provincial Roads

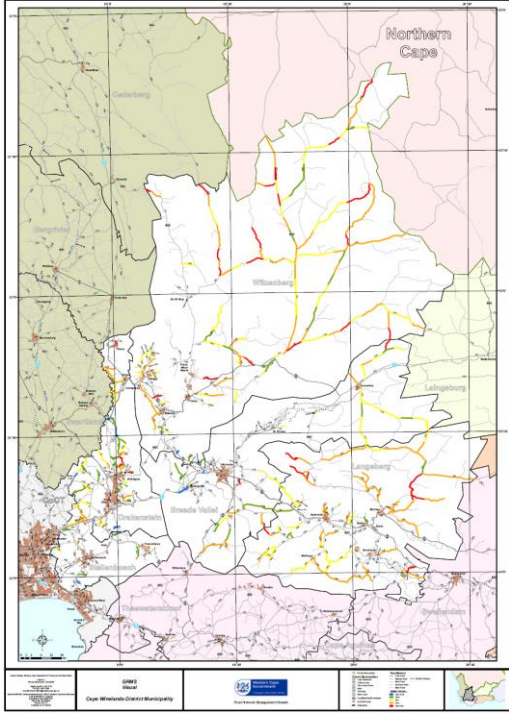


Figure 3-15 Gravel Road Condition of Provincial Roads

The Table 3-15 indicate that total distance of provincial owned road network within the CWDM and 1Table 3-16 indicates the total assets value of provincial owned road network in the district.

Within the district, Witzenberg has the highest distance of provincial owned roads with a total distance of 2167km followed by Langeberg, Breede Valley and Drakenstein.

⁴Table 3-15: WCG Road Network distance

Local Municipality	National Roads	Trunk Road	Main Roads	Divisional Roads	Minor Roads
Drakenstein	72.78	236.24	329.57	309.37	145.93
Breede Valley	184.65	218.38	228.62	369.7	331.65
Langeberg	57.16	180.55	323.44	470.06	484.61
Witzenberg		108.86	417.64	596.19	1045.28

In terms of asset value, Langeberg has the highest asset value with the WCG owned roads totalling approximately R4billion, followed by Witzenberg, Breede Valley and Drakenstein.

¹Table 3-16: WCG Road Asset value

	Trunk	Main		Divisional		Minor		Totals	
	Surfaced	Surfaced	Gravel	Surfaced	Gravel	Surfaced	Gravel	Surfaced	Gravel
Drakenstein	R 774 576 000	R 1 680 709 000		R 875 500 000	R 5 321 000	R 103 375 000	R 83 000	R 3 434 161 000	R 5 404 000
Breede Valley	R 1 342 094 000	R 700 589 000	R -	R 1 376 510 000	R 10 681 000	R 347 956 000	R 2 364 000	R 3 767 150 000	R 13 045 000
Langeberg	R 1 659 872 000	R 1 649 569 000	R 908 000	R 664 747 000	R 7 851 000	R 40 198 000	R 1 176 000	R 4 014 386 000	R 9 934 000
Witzenberg	R 1 045 187 000	R 1 367 618 000	R 17 291 000	R 1 245 610 000	R 12 024 000	R 123 380 000	R 2 573 000	R 3 781 795 000	R 31 888 000

⁴Information as at 3 August 2015

3.6.2 Traffic Volumes

National Roads

The Average Annual Daily Traffic (AADT) and Average Daily Truck Traffic volumes for the National Route 1 (N1) and National Route 2 (N2) were obtained from the South African National Road Agency Limited through their Comprehensive Traffic Observations (CTO).

The ADT volume of the N1 within the district varies between Touwsriver and Paarl. However, the percentage of truck traffic remains constant at approximately 20% of the ADT.

Provincial Roads

According to the Road Network Information System of the Western Cape Government, the AADT for the provincial roads can be broken up into AADT of 100 vehicles and less, between 101 – 300, 301 – 500, 501 – 1500, 1501 – 4500, 4501 – 13500 and 13501 – 40000.

According to the RNIS database, the following major roads in the CWDM accommodate in excess of 13500 AADT;

- R44 in Wellington (Drakenstein LM)
- Champagne St and Piet Retief, (Drakenstein LM)
- Jan Van Riebeeck Dr (Drakenstein LM)
- R303 between Ceres and Bella Vista (Witzenberg LM).

Other provincial roads experiencing AADT of between 4501 – 13500 vehicles are:

- R303 between Bella Vista and Prince Alfred Hamlet, sections of the R46 (Witzenberg LM)
- R60 from Ashton in Langeberg to Worcester in Breede Valley
- sections of Van Riebeeck St between Rawsonville and Worcester (Witzenberg LM)
- R45 between Wellington and Hermon.

3.6.3 Road Safety

The road accident information provided by the Western Cape Government indicates the number of injuries and fatalities over the last decade. What is evident from Table 3-17 is that there has been a general decrease from 2009 in the total number of injuries in road related accidents. There is no clear trend in fatalities.

The Drakenstein local municipality experienced the highest number of injuries and is most likely attributed to the high volume of traffic experienced in this municipality (relative to the other municipalities).

Table 3-17: Cape Winelands District Accident Information

Year	Fatalities	Serious Injury	Slight Injury	No Injury	Total
2000	39	156	865	6573	7633
2001	43	189	819	6068	7119
2002	42	171	1074	6944	8231
2003	47	149	903	6310	7409
2004	61	198	962	6775	7996
2005	32	122	878	6752	7784
2006	39	205	904	7792	8940
2007	43	195	942	7606	8786
2008	40	243	946	7953	9182
2009	41	237	996	8650	9924
2010	41	267	962	8471	9741
2011	45	193	1001	7647	8886
2012	50	155	872	7894	8971
2013	39	199	935	8659	9832
2014	45	210	932	9041	10228

3.7 Non-Motorised Transport

A key transport challenge in most rural districts of SA, including Cape Winelands, is not only the widely distributed nature of towns and the opportunities they provide, but also the low intensity of land uses within towns. These two factors negatively impact on both public transport and NMT (as a mode in its own right and as a feeder to public transport).

In many of the district's towns, the challenges for NMT can be summarised as follows:

- Low population densities increasing the need to travel farther than acceptable walking distances, while undermining the financial viability of public transport;
- Low incomes of residents (high levels of unemployment and seasonal work), making public transport unaffordable;
- Settlements structured with low income residents on the periphery, away from travel destinations;
- Lack of continuous pedestrian routes that are both safe and comfortable (often lack of paving forces pedestrians onto road surfaces);
- Poor maintenance of travelled surfaces;

The Cape Winelands NMT Masterplan Framework (2016) sets out a set of guiding principles to address this, and identifies a number of high priority projects. The principles are about both physical connectivity and creating the conditions needed to make walking and cycling more viable as transport options, covering the following areas:

- Accessibility of services and destinations for users of all abilities;
- Connections that are direct and continuous;
- Convenience with appropriate standards, maintenance and lighting;
- Convivial – a network and surrounding properties that is attractive, safe and secure;
- Comfortable and easy to use, with appropriate facilities for rest and shelter; and
- Contextual – a positive character that is clear to use and consistent with neighbourhood character

The recommended improvements take into account the general profile of each town (size, land uses, types of NMT users and the need for travel internally and externally) in order to identify appropriate NMT improvements. Depending on the character of the town and the population’s travel requirements, solutions may focus on walking, cycling, public transport or some combination of these. There are some general low-cost measures that are recommended, as well as other more costly capital projects. In some towns there is a need for more extensive area-wide planning. The NMT Conceptual Framework also identifies clusters of towns that are functionally linked as a result of where people live, work, shop and receive social and educational services.

3.8 Learner Transport

In the rural context learner transport is very important because of the spatial divide between residential areas and commercial, academic and social facilities, lack of infrastructure and limited disposable income of the residents. Learner or scholar transport bridges this gap by moving scholars who travel more than 5km.

Table 3-18 indicates the total number of approved learners being transported per local municipality. Table 3-19 indicates the number of benefitting schools in each local municipality.

Breede Valley has the highest number of learners being transported as well as the highest number of schools

benefitting. This suggests that the spatial gap between the residents and the schools are significant, considering that Breede Valley only has the 3rd largest population and 2nd largest land area in the district (as indicated in section 3.2).

The school bus routes can be found in Annexure B: School Bus Routes .

Table 3-18: Approved Mainstream Learner Numbers

All learners	Total Approved Mainstream Learner Numbers
Breede Valley Local Municipality	4908
Drakenstein Local Municipality	2413
Langeberg Local Municipality	1976
Witzenberg Local Municipality	3263
Total	12560

Table 3-19: Number of Benefitting schools

All Learner Routes	Total no. of Benefitting Schools
Breede Valley Local Municipality	9
Drakenstein Local Municipality	4
Langeberg Local Municipality	3
Witzenberg Local Municipality	6
Total number of benefitting schools	251

3.9 Freight Transport

The freight system in South Africa is integral to the transport network and operations. Within the CWDM, freight is transported by road based modes as well as rail. Road based freight affects the road condition, road safety and traffic volumes. The road infrastructure is deteriorating rapidly due to overloading coupled with a lack of weighbridge facilities, lack of infrastructure routine maintenance and inadequate law enforcement.

As illustrated in Chapter 1, the Cape Winelands District consists of 5 local municipalities i.e. Stellenbosch, Drakenstein, Witzenberg, Breede Valley and Langeberg. As indicated in Chapter 1, the freight needs of the district are aligned with the Vision, Goals and Objectives. The

primary economic driver in the Cape Winelands district is the agricultural sector. This sector requires seasonal inputs for production and distribution of its produce, transported mainly by road.

The main source of freight information for the Cape Winelands District was extracted from the Cape Winelands Freight Strategy which made use of the Freight Transport Data Bank which was compiled for the Western Cape Department of Transport Roads and Public Works (2006). According to this, the dominant type of road freight moved through the district was agricultural produce, chemicals and perishables.

The Cape Winelands has an extensive road network, including national routes that connect the Western, Northern and Eastern Cape and arterials that connect the district internally and externally with other districts. The Cape Winelands District is situated such that freight movement to the Port of Cape Town from the hinterland would travel through the district.

In Paarl (in Drakenstein), there is a large existing industrial area at Dal Josefat, as well as a newly built Imperial Logistics warehouse which will increase the heavy haul traffic experience in the town. The town also has existing long haul service providers which may add to the heavy haul traffic. Wellington also currently has an industrial area.

Both Paarl and Wellington also have an agri-processing industry with various agricultural farms producing a variety of foods. These goods may be considered input produce or can be transported as end products.

Within the Witzenberg area, the main freight being transported is fresh fruit and vegetables for export. The implication of poorly maintained roads is that it may damage the produce to such an extent that the grading of the produce may be impacted negatively, affecting the selling price. An important route for the transport of freight from Witzenberg to the Port of Cape Town is via the R44, and R46 and connecting with the N1. It has been noted that Ceres has experienced a growth in through traffic of heavy haul vehicles mainly travelling within the Western Cape.

Breede Valley has some of the major freight generators located close to the major road network, such as the Hex River Valley farms. Worcester industrial area also generates freight movement. It has been noted that the heavy haul vehicles often travel through the centre of Worcester. A bypass connecting the R60 to the N1 and

connecting the Worcester industrial area has been proposed (eastern bypass).

In the Langeberg area, Ashton, Montagu and Bonnievale all have industrial areas which generate freight that needs to be transported. The main freight movement however, is found on the R62 and R60 from Ashton to Swellendam.

The Cape Winelands Freight Strategy (2012) concludes by stating that the N1 is considered a main freight route, linking the hinterland to the Port of Cape Town for export. There are a number of heavy haul routes currently being used within the Cape Winelands District.

The primary general freight network, based on largest freight volumes within the district, is comprised of the following:

- N1 through route via Worcester
- R44/R46 Somerset West – Stellenbosch – Klapmuts – Wellington – Gouda – Ceres – Touwsriver (N1)
- R60: Worcester- Swellendam
- R43: Wolseley – Worcester
- R45: Franschhoek – Klapmuts
- R304: N1 – Stellenbosch
- R44 Gouda – Piketberg (secondary network)
- R303 Ceres – Prince Alfred Hamlet/ Op-die-Berg/ Citrusdal (secondary network)
- R43 Worcester – Villersdorp – N2 (secondary network)

The main goods being transported are general goods, with abnormal and hazardous goods being transported occasionally.

The quality of the road infrastructure impacts the quality of the fresh produce being transported and can increase vehicle maintenance costs, and therefore has an economic impact.

An update of the Freight Strategy suggests that the strategic freight network should include the R315 (between Robertson via Bonnievale toward the N2), M2 (Polkadraai Rd from Stellenbosch toward Parow in CCT), R310 (Baden Povel Drive between Stellenbosch Arterial and the N2), Annandale Rd and the M23 (Bottelary Rd).

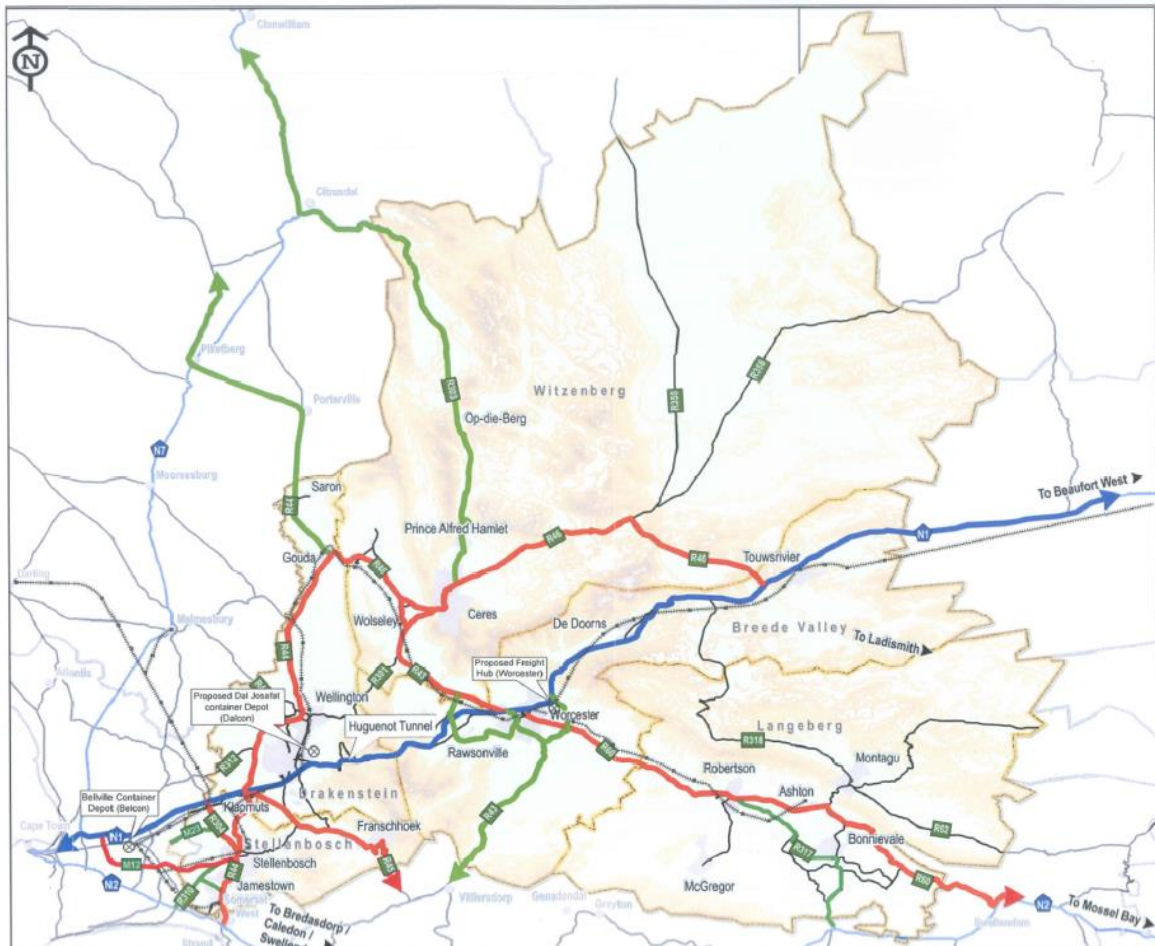


Figure 3-16: Updated Freight Network

As indicated in the Review of the Cape Winelands Freight Transport Strategy (2013), the long term improvements include engagement with WCG regarding prioritisation of roads projects for maintenance of freight routes, design and construction of the modal interchange and logistics hub facility in Worcester, and design and construction of proposed by-pass routes. The engagement also included investigation of the relocation of overloading centres with acceptable levels of support services such as storage facilities, off-loading equipment etc.

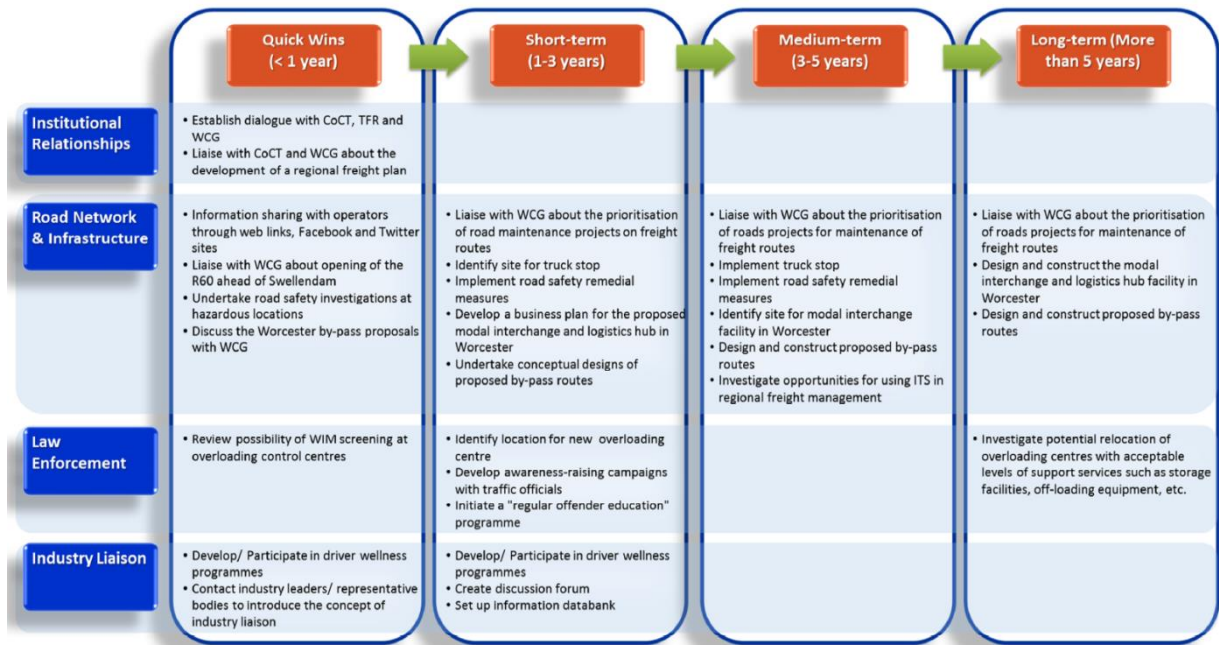


Figure 3-17: Freight Strategy Proposed Transport Improvements

3.10 Air Transport

Currently within the Cape Winelands District, there are three operational airfields, which are located in Robertson, Stellenbosch and Worcester. These facilities are used for civilian and private air travel and have paved and unpaved runways.

The airport in Robertson is located east of the town next to the R60 and is the only registered runway in the Langeberg local municipality.

Table 3-20 illustrates some information regarding the Robertson airport.

Table 3-20: Robertson Airfield details

Item	Description
IATA ⁵ code	ROD
Latitude	-33.8113
Longitude	19.9067
City	Robertson
Airfield length	1.5 km (paved)
Owner	Langeberg Municipality

The Robertson airfield surface is suitable to accommodate light aircraft such as those used for medical emergencies and law enforcement as well as smaller passenger charter aircraft. The facility is generally used by the flying clubs, emergency services and charter services.

The airfield in Worcester is currently being used for sports flying and private use. One of the main constraints with this airfield is that a portion of the airstrip is gravel and therefore cannot accommodate a variety of air transport services, such as medical services (although there is a helipad at the hospital in Worcester). Currently the airfield is being used by flying clubs and some charter services.

⁵ International Air Transport Association

Table 3-21: Worcester airfield

Item	Description
IATA code	No code
Latitude	S 033 deg 40.0'
Longitude	E 019 deg 25.1'
City	Worcester
Airfield length	1.6km (of which 600 m is gravel – 300m at each end of the landing strip)
Owner	Worcester Municipality

3.11 Transport Planning for Tourism

The Cape Winelands district offers a range of tourist attractions and activities. The numerous wine farms and wine tasting events held in the district contribute towards economic development. A number of animal attractions can also be found within the district. The district is also known for its mountain ranges, mountain biking and hiking trails.

Within the district there are private operators which provide transport services as part of tour packages. At this stage no public transport operators provide tourist travel packages. This is an opportunity for the public transport operators to provide services, during the off-peak, to tourists who may want to travel between attractions. However, in order for tourist transport service to take place, an increase in the signage (of tourist activities) and improvement of NMT facilities need to take place.

3.12 Health⁶

The information pertaining to health services transport was obtained from the previous (2013) update of the CPTR reports for the local municipalities within the Cape Winelands district.

The Emergency Medical Service (EMS) is a subsidiary of the Department of Health and is divided into emergency and Healthnet services. Healthnet is not an emergency service, but it provides transport services for

⁶ The section on Health should be considered as part of the next update of the Cape Winelands DITP.

patients going to health facilities for medical treatment or to collect medication.

Services provided by the EMS

There are 10 Patient Transport Vehicles (PTVs) servicing health patients in the Cape Winelands district. Table 3-22 lists the locations of sub-stations in the local municipalities and the number of PTVs per sub-station.

Table 3-22 Healthnet sub-stations and PTV's

LMS	Towns (sub-stations)	No of PTV's
Breede Valley	Worcester	3
	Touwsriver	1
Drakenstein	Paarl	1
Langeberg	Robertson	1
	Montagu	2
Witzenberg	Ceres	2

The service is pre-booked by the hospital or the clinic and the patients are notified of the dates when the service will be available and the location of the collection points within their towns. Table 3-23,

Table 3-24, Table 3-25 and Table 3-26 outlines the collection points for Healthnet services in various towns within Breede Valley, Drakenstein, Langeberg and Witzenberg respectively. Special arrangements, such as collection from home, are made for patients who cannot get to the designated collection point.

Table 3-23 Collection points for Healthnet Services in Breede Valley LM

Collection points	Address
Hexpark Superette	Hexpark
Maria Pieterse Clinic	Riverview
WPH	WPH
BKH	Brewerskloof Hospital

Collection points	Address
Zwelethemba SAPD	Zwelethemba
Rawsonville SAPD	Rawsonville
Avianpark Superette	Avianpark
Maranata Church	Johnsonpark
Mini Mall / Checkers	Avianpark
Worcester Base	Worcester
De Novo	Rawsonville
Nuwerus OAH	Worcester

Table 3-24 Collection points for Healthnet Services in Drakenstein LM

Collection points	Address
Saron Clinic	Hoof Street, Saron
Gouda Clinic	Roos Street, Gouda

Table 3-25 Collection points for Healthnet Services in Langeberg LM

Collection points	Address
Ashbury	Bus stop Ashbury
Montagu	Primary Health Clinic Montagu
Montagu Provincial Hospital	c/o Hospital & Church Street
Zolani Clinic	Zolani
Cogmanskloof Clinic	Ashton
Happy Valley Clinic	Bonnievale
Bonnievale Municipal offices	Bonnievale
Bergsig Clinic	Robertson

Collection points	Address
Robertson Clinic	Robertson
Nkqubela Clinic	Robertson
Ashbury Bus stop	Ashbury
Montagu Primary Health Clinic	Montagu

Table 3-26 Collection points for Healthnet Services in Witzenberg LM

Collection points	Address
HM Beets Crèche	Lyell Street, Ceres
Ceres Hospital	Rivierkant Street, Ceres
Ceres Base	Voortrekker Road, Ceres
Bella Vista shop	c/o Magnolia & Jacaranda Street
Kruger Shop	Tulp Street, Bella Vista
St Matthews Church	c/o Delta & Mimosa Street, Bella Vista
Tulbagh	
Tulbagh Base Plein Street	Tulbagh
Tulbagh PGS	Steynthal Avenue
Tulbagh Shop	First Avenue, Tulbagh
Wolseley	
Montana Clinic	Church Street, Wolseley
Breerivier Clinic	Wagenboom Kelder
Saron Clinic	Hoof Street, Saron
Gouda Clinic	Roos Street, Gouda

4 OPERATING LICENCE STRATEGY

4.1 Introduction⁷

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

In the 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 by the NPTR) must be referred to the relevant Planning Authority (Municipality) which must then indicate if there is a need for the service in terms of its Integrated Transport Plan. Planning Authorities may recommend that the application be accepted or rejected or may attach conditions to the approval.

If the Operating Licence function has been assigned to a Municipality (Section 11 of the Act), then the 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 Cape Winelands District Municipality or the Local Municipalities (Breede Valley, Drakenstein, Langeberg, Witzenberg and Stellenbosch) that fall under its jurisdiction and these Municipalities 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 Cape Winelands District Municipality to make recommendations to the PRE based on the policies and strategies contained in its DITP 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).

4.2 The Public Transport System

Route descriptions and route maps showing a number of routes are contained in the Current Public Transport Record that was updated for the Cape Winelands District ITP (2016-2021).

During surveys carried out to determine the utilisation of the routes, it was ascertained that many of the routes were not being operated at the time of the survey and that the routes actually operated did not rigidly follow the official route descriptions contained in the PRE database. Several routes were also surveyed that did not appear to be official routes for which Operating Licences had been issued. Extensions to these routes or other unlicensed routes that may be in operation require consideration for new Operating Licences.

4.3 Policy Framework

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

The National Land Transport Act (NLTA) lists the responsibilities of Planning Authorities including the preparation of an 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 R954, 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

⁷ For more detail on the Cape Winelands District Operating Licence Strategy consult with the Operating Licence Strategy report

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 indicate 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 applications for Operating Licences. The regulations also deal with the submission of Operating Licence applications to Planning Authorities for comment. The Regulations provide that:

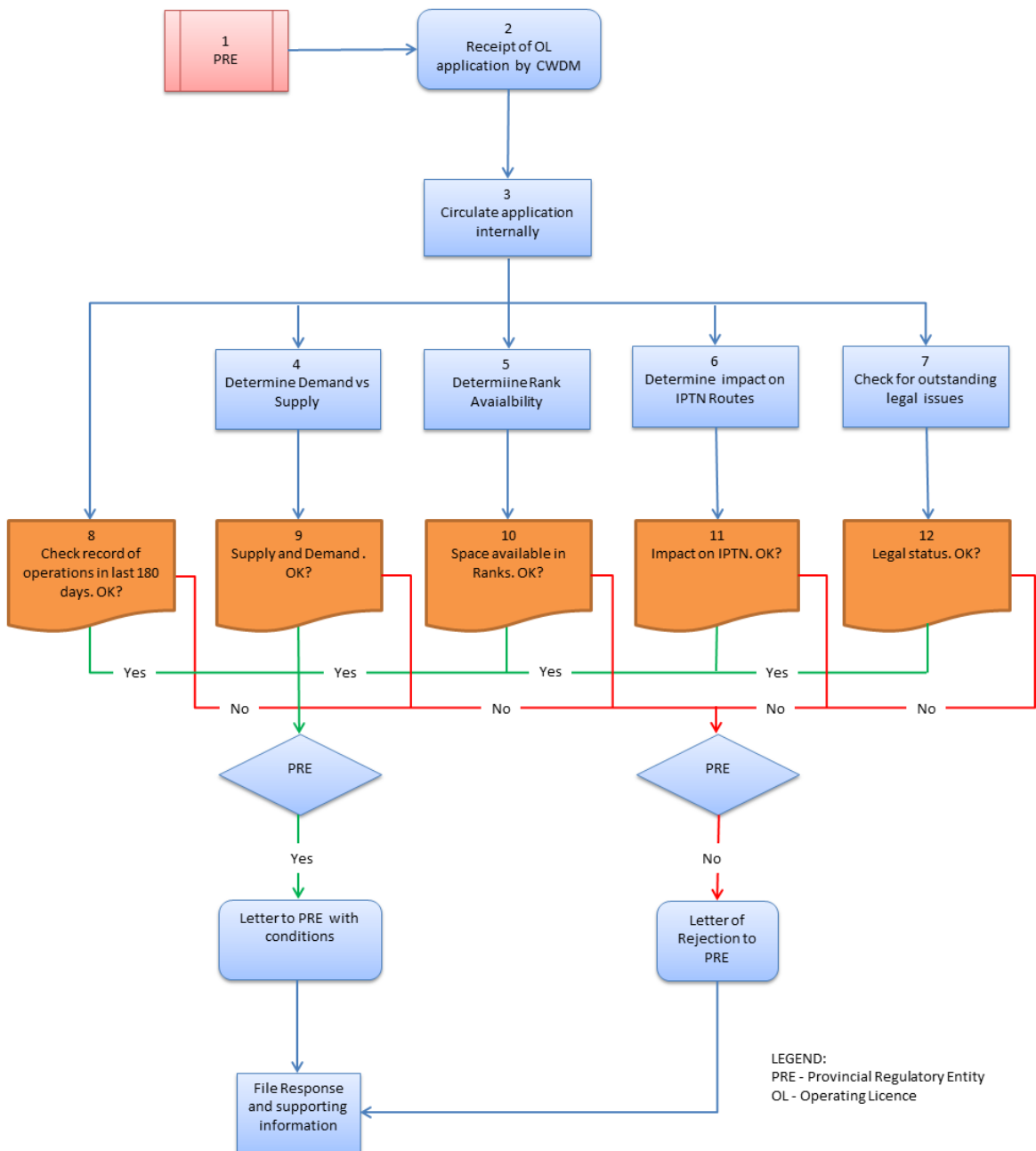
- An application must be submitted in writing to the Planning Authority within 30 days of receipt
- The PRE must dispose of the application within 90 days of receipt
- The Planning Authority must:
 - Verify the route details claimed by the applicant
 - In the case of the conversion of a permit to an 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 itself 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.

4.4 Evaluation Process

When a new application for an Operating Licence is received by the Planning Authority a process should be followed to evaluate the application. The proposed process is shown in Figure 4-1 and is described in more detail in Table 4-1 below

Figure 4-1: Operating Licence Evaluation Process



The proposed Operating Licence evaluation procedure is described in Table 4-1.

Table 4-1: 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 Planning Authority (Municipality) (PA) within 30 days.	NPTR or PRE
2.	Receipt of OL application by PA	The OL application is received by the PA and is recorded in the appropriate manner for record purposes. The application is sent to the appropriate Department within the PA dealing with Transport Planning and Public Transport to be checked for completeness.	PA Department (Transport Planning and Public Transport)
3.	Circulate application internally	The OL is circulated to the appropriate persons / Departments internally within the PA for comment in respect of : Transport Planning and Public Transport Traffic Services	PA Department (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 4.3 of the OLS report.	PA 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 4.3 of the OLS.	PA 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.	PA Operating Licence Recommendations Committee
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.	PA 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.	PA (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.	PA Department (Transport Planning and Public Transport)
10.	Letter of Approval or Rejection	A letter of approval or rejection is issued to the applicant and a copy is sent to the PA	Provincial Regulatory Entity

4.5 Summary of Route Assessments

Information on vehicle supply and passenger 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 the following tables:

- Table 4-2: Breede Valley: Operating Licence Requirements and Route Capacities
- Table 4-3: Drakenstein: Operating Licence Requirements and Route Capacities
- Table 4-4: Langeberg: Operating Licence Requirements and Route Capacities
- Table 4-5: Witzenberg: Operating Licence Requirements and Route Capacities

The tables show 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 the tables.

From the above information, the following has been determined:

- The current service capacity: Number of vehicle trips from number plate survey multiplied by the vehicle capacity (15 for a standard minibus)
- Percentage utilisation: Peak hour passenger volume from surveys divided by the 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. 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.

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 routes. 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 issued with Operating Licences on the PRE database, as well as the over and under supply including the vehicles without Operating Licences.

Note that in several cases the surveys at public transport facilities did not register any trips on certain routes and hence the table indicates “no data”. This may be due to the fact that some routes and facilities are only operated during the fruit harvesting season.

Table 4-2: Breede Valley: 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					
Town	Route Number	Rank	Route Name	Route Length (km one way)	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 inc. stops and turnaround (20%) - min.	Service Capacity (=Fxl)	% 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)
Worcester	764, H77, H78, N33	U Save	De Doorns - Worcester	37	09:30 - 10:30 (Saturday)	7	69	7	15	67	105	66%	6	1	-5	37	31	6	1
Worcester	834	Spar	Touwsriver - Worcester	78	09:30 - 10:30 (Saturday)	1	12	1	15	119	15	80%	2	0	-2	5	3	1	-1

Table 4-3: Drakenstein: 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					
Town	Route Number	Rank	Route Name	Route Length (km one way)	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 inc. stops and turnaround (20%) - min.	Service Capacity (=F x I)	% 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)
Paarl	786, 899	Amstelh of	Shoprite A	4	11:00 - 12:00 (Saturday)	13	169	12	15	21	195	87%	4	4	0	26	22	8	8
Paarl	B23, B25, B26, 963, 641	Chicago	Shoprite A	13	16:30 - 17:30	5	56	5	15	15	75	75%	1	2	1	34	33	3	4
Paarl	786, 899	Huguenot	Amstelh of	3	16:30 - 17:30	2	28	2	15	6	30	93%	1	2	1	26	25	0	1
Paarl	B23, B25, B26, 963, 641	Huguenot	Nederberg via Chicago	5	16:30 - 17:30	3	42	3	15	14	45	93%	1	1	0	34	33	2	2
Paarl	803,767, H93, H94, H95, 993, B98, B99	Shoprite B	Mbekweni	14	16:30 - 17:30	24	371	24	15	12	360	103%	5	0	-5	158	153	24	19
Paarl	943, 970	Shoprite B	Wellington	15	16:30 - 17:30	19	277	19	15	35	285	97%	11	15	4	141	130	4	8
Wellington	943, 970	Wellington	Paarl	12	16:15 - 17:15	32	480	31	15	24	480	100%	13	26	13	141	128	5	18
Paarl	803,767, H93, H94, H95, 993,	Huguenot	Mbekweni	7	16:30 - 17:30	1	14	1	15	12	15	93%	1	0	-1	158	157	1	0

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						
Town	Route Number	Rank	Route Name	Route Length (km one way)	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 inc. stops and turnaround (20%) - min.	Service Capacity (=F x I)	% Utilisation (=G/K)	Required Vehicles With OLS (Weekly) (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)	
	B98, B99																			
Paarl	803,767, H93, H94, H95, 993, B98, B99	Huguenot	Paarl	7	16:30 - 17:30	5	84	5	15	12	75	112%	2	1	-1	158	156	4	3	
Paarl	B23, B25, B26, 963, 641	Huguenot	Chicago	4	16:30 - 17:30	2	28	2	15	14	30	93%	1	1	0	34	33	1	1	
Paarl	803,767, H93, H94, H95, 993, B98, B99	Shoprite A	Mbekweni	11	11:00 - 12:00 (Saturday)	9	143	9	15	23	135	106%	4	0	-4	158	154	9	5	
Paarl	958, B12	Shoprite A	Nederburg	6	16:30 - 17:30	9	132	9	15	15	135	98%	3	3	0	11	8	6	6	

Table 4-4: Langeberg: 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					
Town	Route Number	Rank	Route Name	Route Length (km one way)	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 inc. stops and turnaround (20%) - min.	Service Capacity (=Fxl)	% 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)
Robertson	686	Shoprite	Robertson - Robertson	8	16:30 - 17:30	4	53	3	15	6	60	88%	1	3	2	35	34	0	2
Bonnievale	N37	Bonnievale: Multisave	Robertson - Bonnievale	21	11:00 - 12:00	1	1	1	15	202	15	7%	1	0	-1	15	14	1	0
Robertson	N34	SAPS	Robertson - Bellville	136					15	1306	0	0	0		0	4	4	0	0
Robertson	N35	Pick n Pay	Robertson - Ashton	16	11:00 - 12:00	7	53	7	15	33	105	50%	2	0	-2	18	16	7	5
Ashton	968	Multisave	Ashton Multisave	16	07:00 - 08:00	2	17	2	15	14	30	57%	1	0	-1		-1	2	1
Montagu	725	Montagu Bad St	Montagu - Ashbury	9	16:30 - 17:30	7	96	7	15	11	105	91%	2	4	2	15	13	3	5
Robertson	686	Pick n Pay Nqubela	Robertson - Robertson	4	10:00 - 11:00	9	20	9	15	20	135	15%	1		-1	35	34	9	8

Table 4-5: Witzenberg: 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					
Town	Route Number	Rank	Route Name	Route Length (km one way)	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 inc. stops and turnaround (20%) - min.	Service Capacity (=Fxl)	% 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)
Wolseley	G47	Wolseley	Wolseley - ceres	16	06:00 - 07:00	1	15	1	15	154	15	100%	3	0	-3	8	5	1	-2
Ceres	898	Bella Vista	Ceres - bella vista	4	16:30 - 17:30	21	294	17	15	38	315	93%	13	15	2	36	23	2	4
Ceres	822, 823, H16	Ceres/ Nduli Rank	Nduli - ceres	7	16:30 - 17:30	22	208	19	15	67	330	63%	16	0	-16	54	38	19	3
Ceres	D66	Vos Street Rank	Prince alfred hamlet - ceres	9	16:30 - 17:30	3	40	3	15	78	45	89%	4	3	-1	9	5	0	-1
Ceres	No route code in PRE database	Vos Street Rank	Ceres - Bokkeveld		16:30 - 17:30	2	14	2	15	116	30	47%	2	0	-2		-2	2	0
Tulbagh	877	Tulbagh (van der Stel)	Tulbagh - Tulbagh Farms	20	16:30 - 17:30	1	16	1	15	192	15	107%	4	0	-4	9	5	1	-3
Tulbagh	875, 878	Tulbagh (van der Stel)	Tulbagh - Tulbagh	8	16:30 - 17:30	3	47	3	15	77	No Data	No Data	No Data	2	No Data	17	No Data	No Data	No Data

4.6 Proposals for Implementation

The Cape Winelands District Municipality has adopted a policy to improve public transport services and the DITP contains a framework strategy for the planning and phased implementation of an Integrated Public Transport Network. The introduction of an IPTN may affect existing bus and minibus taxi services. The proposed preliminary IPTN routes are indicated in the OLS report. Consideration should be given to the phasing out of existing affected Operating Licences and the placing of a moratorium on the approval of new Operating Licences that impact on these routes.

The CWDM is to consider a Chapter 8 investigation as determined by the Municipal Systems Act in order to determine the institutional arrangements for the rendering of the public transport function within its area of jurisdiction.

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 on routes used by public transport.

Law enforcement is critical to the successful implementation of the OLS and a dedicated team of Inspectors and Law Enforcement Officers is necessary 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.

4.7 Financial Implications

The implementation of the proposals set out above will have financial implications for the CWDM. A broad cost estimate of the proposals is contained in Table 4-6.

Table 4-6: Financial Implications

No.	Item	Estimated Annual Cost – Rands				
		2015/16	2016/17	2017/18	2018/19	2019/20
1	Assessment of Operating Licences impacting on future IPTN routes	0	300 000			
2	Chapter 8 Investigation	0	2 500 000	2 500 000		
3	Investigation of the Improvement of Transport Facilities	0	1 000 000	0	0	0
4	Establish Operating Licence Inspectorate	500 000	2 500 000	3 000 000	3 000 000	3 000 000
5	Establish and maintain electronic database of Operating Licences	100 000	50 000	50 000	50 000	50 000
6	Establish a Public Transport Forum including Public Transport Operators	50 000	50 000	50 000	50 000	50 000
	TOTAL	650 000	6 400 000	5 600 000	3 100 000	3 100 000

5 RATIONALISATION PLAN

5.1 Introduction

Although there is no subsidised public transport, apart from the PRASA metro rail system operating in the CWDM, this chapter will summarise the Integrated Public Transport Network (IPTN) Framework that was previously prepared for the Cape Winelands District Municipality, excluding Stellenbosch.

An IPTN Framework was prepared for the Cape Winelands district in 2012 within the current planning and legal context of the district. The intention of the IPTN report is to provide a guiding framework for the alignment of all spheres of government within the district when planning and implementing public transport services.

The Stellenbosch Local Municipality intends to prepare an IPTN for its area during 2016.

5.2 The Cape Winelands IPTN Framework Plan

It is the intention of the CWDM to establish an efficiently operated and integrated public transport system within its jurisdiction. The first step towards this was the development of an IPTN framework for the district. This framework would then provide guidance for the LM within the Cape Winelands district in designing, implementing and managing their local public transport operations.

The framework focussed on various elements which include:

- institutional,
- network and system design,
- vehicle specifications,
- infrastructure and modal integration,
- safety and security,
- intelligent transport system,
- operation contracts and monitoring,
- communication and branding,
- environmental,
- procurement,
- financial,
- and implementation.

Some of the key issues are the following:

Institutional

An effective institutional structure is necessary to manage, administer and operate the Integrated Public Transport Network, with a focus on the role and function of key stakeholders, institutional structure and transition strategy.

Financial

A financial model was developed with the aim of indicating the financial feasibility and affordability of the proposed IPTN. This model consisted of

Implementation

The implementation of the IPTN will be subject to various planning phases of the proposed network. These planning phases are:

Phase 1: Initial detailed planning activities

Phase 2: Industry negotiations and Business Plan

Phase 3: Detail design and development of specifications and tender documentation

Phase 4: Implementation and procurement

A Summary of the IPTN Goals, Objectives and Design Principles are indicated in the table below:

Table 5-1: IPTN Goals, Objectives and Design Principles

IPTN Framework Element	IPTN Objectives	IPTN Feature
Broad Network System Design in terms of routes, infrastructure and operations	To develop an integrated public transport system that will be affordable (less than 10% of personal income spent on transport) and accessible (90% of all passenger groups within 1km of public transport service)	<ul style="list-style-type: none"> • The IPTN shall consist of a system of road-based regional (trunk) and local (feeder) services to ensure maximum geographic and network coverage. • The IPTN shall cater for the travel needs of commuters within the urban areas, social travel needs between towns, travel needs of learners and the travel needs of farm workers and other rural people over weekends. • Peak and off-peak services between major origins and destinations on the IPTN shall be frequent and shall be provided by the appropriate mode for the corridor demand. • Services shall be available over extended periods including after hours and over weekends. • All services shall be operated according to a fixed timetable. Customer service shall be of a high quality.
Consider and recommend an appropriate Institutional and Organizational Model	To establish an appropriate institutional and organizational structure/model that will allow the IPTN to be effectively controlled by the authorities in terms of quality of services and budgets.	<ul style="list-style-type: none"> • Public transport quality control oversight shall be done by an independent public transport agency appointed by the relevant municipality/ies. • The system shall be managed by the independent agency through a centralized control centre using Intelligent Transport Systems (ITS) applications. • The Automated Fare Collection system (AFC) and Advanced Public Transport Management System (APTMS) will be managed by an independent operator appointed by the public transport agency.
Develop a model Operational Contract between authorities and operating entities	To control the quality of the IPTN services through the contracting of the private sector for the rendering of the services, including mechanisms to penalize service providers for poor performance.	<ul style="list-style-type: none"> • Public transport services shall be provided by a contracted entity which shall be appointed through a formal tender process. The operational contract will be for a period of seven to 12 years.
Specify different Vehicle Types appropriate for different services required	To ensure that all vehicles used for both trunk and feeder services are of high quality, well-maintained and safe.	<ul style="list-style-type: none"> • Sufficient vehicle capacity shall be available to prevent overloading and long queues. • Buses should be equipped with low emission and low-noise vehicle technologies. • Minibus-taxi vehicles should comply with the national specification for recap vehicles.

IPTN Framework Element	IPTN Objectives	IPTN Feature
Positioning, size, geometric layout and key features of IPTN Infrastructure	To develop and implement quality infrastructure that will allow for the effective and smooth operation of IPTN services. This will include measures to give priority to public transport in traffic, facilities required for the maintenance of vehicles as well as facilities that will provide safe and convenient access to the system for the users.	<ul style="list-style-type: none"> • Road IPTN regional (trunk) and local (feeder) services shall operate mainly in mixed traffic. However, the feasibility of segregated trunk routes along the R44 between Somerset West and Stellenbosch, and along the R301 between Wellington and Paarl shall be considered. • Specific arrangements to give priority to IPTN vehicles at congested signalized intersections in Stellenbosch, Paarl, Worcester and Wellington shall be considered where warranted. • Public transport facilities, i.e. termini and stops, shall be convenient, comfortable, accessible, secure and weather protected, and shall facilitate integration between public transport modes and services. • All facilities will be well-maintained and cleaned on a daily basis. • Clear route maps, signage and/or real time information displays shall be available at facilities. • Service providers will be contracted by the public transport agency for security services and facility cleansing services.
ITS and AFC System in terms of functions, technology, equipment, control rooms and personnel	To implement new technologies, such as APTMS and AFC, that will allow for the effective monitoring and control of the system and which will provide the passenger with a cost effective, practical and simple tool to pay for fares.	<ul style="list-style-type: none"> • Payment of fares shall be made through the use of smart card technology. Fare collection and verification will be done by means of a device installed at the entrance(s) of vehicles. • Fare integration between trunk and feeder services, and between routes, corridors and modes, shall be achieved through automatic fare collection and verification technology.
Marketing initiatives, common marketing material and marketing brand	To improve the image of public transport and to increase user information/knowledge of public transport services.	<ul style="list-style-type: none"> • The IPTN shall have a distinctive identity or brand.
Integration with other transport modes and integration of network and services across municipal boundaries	To ensure that public transport services, information systems and fare systems of all modes are interconnected as far as is technologically achievable.	<ul style="list-style-type: none"> • The rail system shall form an integral part of the IPTN. • Public transport facilities, i.e. termini and stops, shall be convenient, comfortable, accessible, secure and weather protected, and shall facilitate integration between public transport modes and services. • Convenient and secure parking facilities for the parking of private cars at termini and stations shall be provided where appropriate to encourage the move to public transport by private transport users.

IPTN Framework Element	IPTN Objectives	IPTN Feature
Enhance NMT Linkages to and around termini, stations and stops	To enhance accessibility and to improve the safety to public transport termini, stations and stops by pedestrians and other types of NMT.	<ul style="list-style-type: none"> • Improvements shall be made to nearby public space, pedestrian and cycle facilities to support non-motorised access to public transport. • Provision shall be made for special needs passengers such as the disabled, children and the elderly.
Improving Safety and Security of users of facilities and services	To improve safety and security on transport networks and services.	<ul style="list-style-type: none"> • Security at termini and modal integration stations shall be of a high standard and shall be monitored by means of a system of CCTV cameras. • Service providers will be contracted by the public transport agency for security services and facility cleansing services.
Maximise the positive and minimise the negative Environmental and Socio- Economic implications of the proposed system	To reduce the negative environmental and socioeconomic impact of the IPTN.	N/A
Provide guidance on Tender Options and Structure as part of the implementation process	To provide a legal framework for the delivery of accessible, integrated and competitive public transport services that represent value for money, meet the requirements of users in a growing and complex market, as well as providing a level playing field for all service providers.	N/A
Unpacking the costs of IPTN components and possible funding sources of proposed systems	To provide a stable, sustainable, predictable, reliable and (in particular) appropriate funding sources for the IPTN network and system requirements that are relatively easy to administrate.	N/A
Implementation Strategy	To provide a well thought through and practical phased implementation strategy to be executed over the short, medium and long term in order to meet the above objectives.	N/A

The Drakenstein local municipality is considered the first local municipality within the district to commence with an IPTN process in the manner prescribed in the CW IPTN Framework.

5.3 Stellenbosch IPTN Framework

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 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
- 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

5.4 Provincial Public Transport Institutional Framework

5.4.1 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-Metro areas of the Western Cape, through the development of a refined strategic approach for achieving progress.

This refined approach aims to incorporate lessons learnt through the implementation of public transport improvement initiatives in South Africa, particularly in George and Cape Town.

The PPTIF sought to answer the following core questions:

Table 1: PPTIF Core Questions

Core Questions	PPTIF Response
What technical interventions should be implemented to improve public transport and non-motorised transport in the province?	<ul style="list-style-type: none"> • 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?	<ul style="list-style-type: none"> • Develop enhanced institutional and organisational models.
What will these interventions cost, and how could they be funded?	<ul style="list-style-type: none"> • Develop a cost model and funding strategy.

5.4.2 Constraints to progress

This section provides an overview of the key constraints to progress that the PPTIF aims to address, including:

- **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.

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

5.4.3 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.

differing contextual dynamics in the Western Cape. The five categories are:

5.4.4 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



Urban Growth Areas: These are the economic centres of the Province, with very high growth potential, dynamic economies, relatively high population density and the greatest volume of local public transport movement in the Province. This includes the Cape Metro Functional Region and the George-Mossel Bay region.



Industrial Development Area: Including parts of the Saldanha Bay Local Municipality and the Industrial Development Zone (IDZ) that is currently being developed there. This is an area of both National and Provincial importance, with high growth potential.



High Value Agriculture: High intensity agricultural areas, often including groups of smaller urban centres of medium growth potential. Amongst others this includes the Robertson-Ashton region, the Malmesbury-Moorreesburg region and the Caledon-Bredasdorp-Swellendam region.



Extensive Agriculture: Low intensity agricultural areas with low population and density levels, few significant urban centres and low to very low growth potential. This includes most of the Central Karoo and part of the northern West Coast District Municipality.



Coastal Tourism Towns: Urban coastal towns with significant tourism activity, coastal transport corridors connecting a string of closely located towns and villages and very high growth potential.

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.

5.4.5 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 2: 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.

5.4.6 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 municipal level within the Western Cape. 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 and develop 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. 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: Those functions that can sensibly 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 the diagram below.

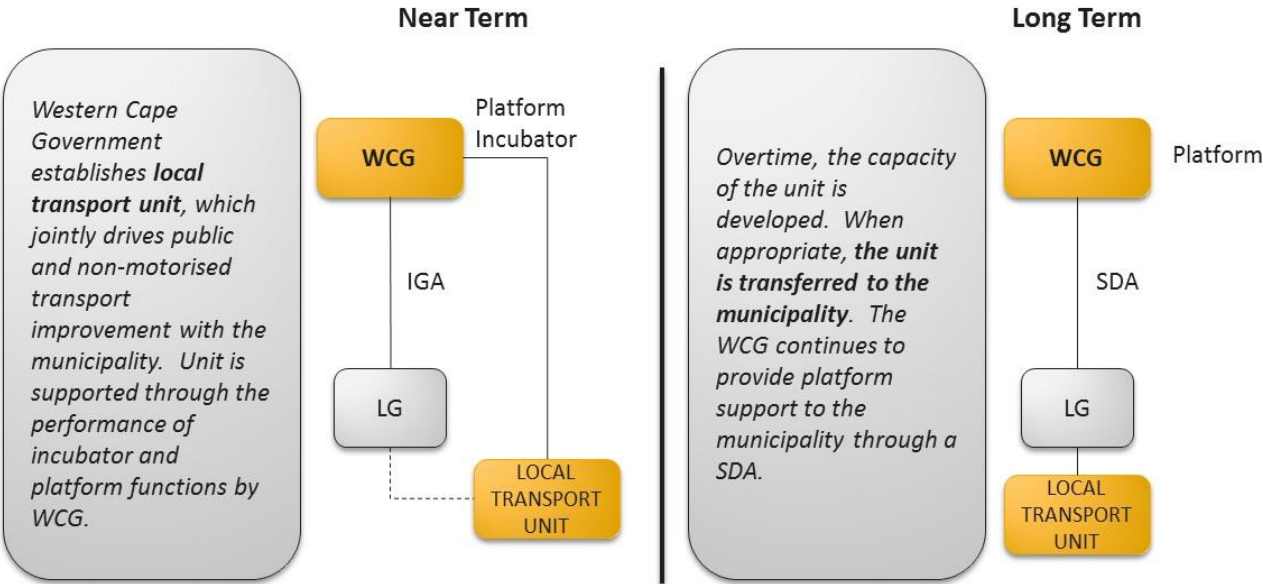


Figure 5-1: Proposed Institutional Arrangements

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.

5.4.7 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.

5.4.8 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 the figure below. The proposed detailed planning and local establishment processes are for targeted or priority municipalities only.

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.

	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

Figure 5-2: High Level Implementation Plan

6 TRANSPORT NEEDS ASSESSMENT

6.1 Introduction

This chapter considers the information collected and discussed in Chapter 3: Transport Register. This chapter identifies transport needs based on this information, including data that has not yet been confirmed by the local municipalities. There are a number of needs which are not unique to only one local municipality. The main needs within the district can be summarised as follows:

- A lack of internal integration with parallel processes such as the Integrated Development Plan, Local Economic Development plan, Spatial Development Framework etc.
- Inadequate budget for public transport infrastructure and facilities, road maintenance
- Limited capacity at a district and local municipal level to fulfil municipal transport planning function.
- Time constraint for implementation of proposed/ planned projects.
- Growth in road freight transport rather than rail, resulting in trucks affecting maintenance requirements and impacting on the quality of life in towns on freight routes.
- Poor connectivity of NMT routes, with varying standards and lack of universal accessibility, which not only reduces mobility but impacts on public transport accessibility.
- Funding infrastructure is a challenge, particularly since the need is widely distributed – people travelling far, to destinations that generate few trips, and from areas of low density.
- Lack of public transport service during the off-peak periods
- Lack of public transport services connecting main town centres with outlying rural areas.

Based on an understanding of the transport needs within each local municipality the following SWOT analysis was prepared. This analysis was done for the follow categories:

- Public Transport

- Public Transport Infrastructure
- Learner Transport
- Freight
- Non-motorised Transport
- Transport for Tourism
- Road Network

6.2 Transport Needs Assessment

Breede Valley

Public Transport	
Strength	Weakness
Existing minibus taxi transport within the towns and between neighbouring towns	limited services during off-peak periods, not universally accessible
Existing rail service at Worcester	No service linking other towns within Breede Valley. Currently only a morning and afternoon/evening service being operated
Opportunity	Threat
create universally accessible facilities	commuters limited purchase power, affordability of public transport
Public Transport Infrastructure	
Strength	Weakness
Existing road based public transport Infrastructure is in a reasonably good condition	There is a lack of shelter at existing facilities
Rail infrastructure not currently being utilised for passenger movement	underutilisation of facilities during the off-peak
Opportunity	Threat/ Constraint
Provision of shelter at existing facilities	Obsolescence
utilising the existing rail infrastructure for passenger movement	Capital infrastructure funding
Learner Transport	
Strength	Weakness
an existing service is being provided	little information available about the learner transport services
Opportunity	Threat
A formalised transport system for learners	Unaffordable or unavailable services for certain categories of learner
Freight	
Strength	Weakness
current freight route Worcester	road infrastructure is inadequate to accommodate the transport of heavy haul vehicles
Opportunity	Threat
create formal overnight facilities for truck traffic passing through Worcester	high maintenance cost associated with truck traffic
create an alternative route for freight movement	

Non-motorised Transport	
Strength	Weakness
some existing NMT infrastructure in CBD	NMT infrastructure is not continuous
existing NMT link from CBD to Zwelethemba	Spatial divide discourages the use of NMT
Opportunity	Threat
provision of NMT infrastructure and end of trip facilities	
provision of bicycles	Crime
Transport for Tourism	
Strength	Weakness
variety of tourist attractions	no scheduled services for transporting tourists between attractions
Opportunity	Threat
provision of a service to transport tourists between tourist attractions	seasonality of tourist attractions
Road Network	
Strength	Weakness
existing paved road network is in good condition	Majority of traffic is through traffic travelling on the R60 between the N1 and N2 and on the N1.
	poses safety concerns where schools are located close to high order roads
Opportunity	Threat
new roads are not required	Pedestrian and Vehicle Accidents

Drakenstein

Public Transport	
Strength	Weakness
Existing minibus taxi transport within the towns and between neighbouring towns	limited services during off-peak periods, not universally accessible
Existing rail service at all towns in the municipal area	only two rail services being rendered on this line, one outbound in the morning and inbound in the afternoon/evening
long distance bus service operating through Paarl	inadequate long distance facilities
Opportunity	Threat
create universally accessible facilities	Over supply of minibus taxi services, commuters have limited purchase power, affordability of public transport.
Public Transport Infrastructure	
Strength	Weakness
Existing road based public transport Infrastructure is in a reasonably good condition	There is a lack of shelter at existing facilities
	underutilisation of facilities during the off-peak
Opportunity	Threat/ Constraint
Provision of shelter at existing highly utilised public transport facilities	high maintenance cost
Rail infrastructure not currently being utilised for passenger movement	Capital infrastructure funding
Learner Transport	
Strength	Weakness
an existing service is being provided	little information available about the learner transport services
Opportunity	Threat
A formalised transport system for learners	potential resistance from existing operators, conditions attached to qualify learner transport subsidy
Freight	
Strength	Weakness
current freight route through Ceres and Tulbagh	road infrastructure is inadequate to accommodate the transport of heavy haul vehicles
Opportunity	Threat
create formal overnight facilities for truck traffic passing through the town of Ceres	high maintenance cost associated with truck traffic

Non-motorised Transport	
Strength	Weakness
some existing NMT infrastructure in urban areas	NMT infrastructure is not continuous and not universally accessible
	Limited NMT infrastructure in rural areas, and poor support of public transport
	Safety and Security
Opportunity	Threat
provision of NMT infrastructure and end of trip facilities	
provision of bicycles	
Transport for Tourism	
Strength	Weakness
variety of tourist attractions	no scheduled services for transporting tourists between attractions
Opportunity	Threat
provision of a service to transport tourists between tourist attractions	seasonality of tourist attractions
Road Network	
Strength	Weakness
existing paved road network is in good condition	majority of traffic is through traffic
Opportunity	Threat
new roads are not required	

Langeberg

Public Transport	
Strength	Weakness
Existing minibus taxi transport within the towns and between neighbouring towns	limited services during off-peak periods, not universally accessible
	Commuter affordability
Opportunity	Threat
create universally accessible facilities	commuters limited purchase power, affordability of public transport
Public Transport Infrastructure	
Strength	Weakness
Existing road based public transport Infrastructure is in a reasonably good condition	There is a lack of shelter at existing facilities
Rail infrastructure not currently being utilised for passenger movement	existing formal facility in Zolani not currently being utilised, and underutilisation of facilities during the off-peak
Opportunity	Threat/ Constraint
revitalisation of existing formal facility in Zolani	Obsolescence
provision of rail passenger service	Capital infrastructure funding
Learner Transport	
Strength	Weakness
an existing service is being provided	little information available about the learner transport services
Opportunity	Threat
A formalised transport system for learners	potential resistance from existing operators, conditions attached to qualify learner transport subsidy
Freight	
Strength	Weakness
current freight route through Langeberg (R60/2)	road infrastructure is inadequate to accommodate the transport of heavy haul vehicles
Opportunity	Threat
If warranted create formal overnight facilities for truck traffic passing through the town Robertson	high maintenance cost and increased congestion associated with truck traffic

Non-motorised Transport	
Strength	Weakness
some existing NMT infrastructure	NMT infrastructure is not continuous, and distance between neighbouring towns too great
	safety and security
Opportunity	Threat
delineation of NMT space on existing road network	Crime
provision of NMT infrastructure and end of trip facilities	
provision of bicycles	
NMT Education such as safety	
Transport for Tourism	
Strength	Weakness
variety of tourist attractions	no scheduled services for transporting tourists between attractions
Opportunity	Threat
provision of a service to transport tourists between tourist attractions	seasonality of tourist attractions
Road Network	
Strength	Weakness
existing paved road network is in good condition	majority of traffic is through traffic
	poses safety concerns for pedestrian and scholars where schools are located close to high order roads
Opportunity	Threat
new roads are not required	deterioration of road network

Witzenberg

Public Transport	
Strength	Weakness
Existing minibus taxi transport within the towns and between neighbouring towns	limited services during off-peak periods, not universally accessible
Existing rail service at Tulbagh and Wolseley	no passenger rail service linking Ceres, Prince Alfred Hamlet and Wolseley
	Lack of connectivity between Tulbagh and Op-die-berg to Ceres
Opportunity	Threat
create universally accessible facilities	commuters limited purchase power, affordability of public transport
Public Transport Infrastructure	
Strength	Weakness
Existing road based public transport Infrastructure is in a reasonably good condition	There is a lack of shelter at existing facilities
Rail infrastructure between Ceres, Prince Alfred Hamlet and Wolseley not currently being utilised for passenger movement	existing formal facility in Prince Alfred Hamlet not being utilised & underutilisation of facilities during the off-peak
Opportunity	Threat/ Constraint
Provision of shelter at existing facilities	Obsolescence
utilising the existing rail infrastructure for passenger movement	Capital infrastructure funding
revitalisation of formal facility in Prince Alfred Hamlet	
Learner Transport	
Strength	Weakness
an existing service is being provided	little information available about the learner transport services
	Lack of pedestrian facilities (such as pedestrian crossings or pick-up/drop-off points) for scholars at schools
Opportunity	Threat
A formalised transport system for learners	
Freight	
Strength	Weakness
current freight route through Ceres and Tulbagh	road infrastructure is inadequate to accommodate the transport of heavy haul vehicles
Opportunity	Threat
create formal overnight facilities for truck traffic passing through the town	high maintenance cost associated with truck traffic

Non-motorised Transport	
Strength	Weakness
some existing NMT infrastructure	NMT infrastructure is not continuous or consistent
Opportunity	Threat
provision of NMT infrastructure and end of trip facilities	
provision of bicycles	Crime
Transport for Tourism	
Strength	Weakness
variety of tourist attractions	no scheduled services for transporting tourists between attractions
Opportunity	Threat
provision of a service to transport tourists between tourist attractions	seasonality of tourist attractions makes it difficult to have a scheduled service
Road Network	
Strength	Weakness
existing paved road network is in good condition	majority of traffic is through traffic
	poses safety concerns where schools are located close to high order roads
	heavy vehicle traffic travelling through Ceres
Opportunity	Threat
new roads are not required	deterioration of road network

7 SUMMARY OF LITPs

7.1 Introduction

As mentioned in Chapter 1, part of the DITP review includes updating the local municipality ITPs. This chapter serves to summarise the main elements from each of the local municipalities including Stellenbosch.

7.2 Breede Valley local municipality

The Breede Valley local municipality lies south of the Witzenberg local municipality and north of the Langeberg municipality.

The Breede Valley local municipality includes a number of towns:

- Worcester
- Rawsonville
- De Doorns
- Touws River

Within the Breede Valley area, there are rural and informal areas such as De Wet, Stofland and Zwelethemba.

The primary source of public transport for commuters is minibus taxis with two associations operating in the municipal area. A rail service is currently operating each day of the week which serves travellers between Worcester and Cape Town. The taxi operations are influenced by the agricultural sector seasonality, which suggests that there are annual peak periods for public transport in the municipality.

The National Route N1 is located within this local municipality and accommodates large volumes of traffic through the area. Due to the location of the N1 it is noted that there is significant freight traffic moving through the town of Worcester to get access to the N1.

A number of issues as identified during the stakeholder engagement meetings include, high public transport fares, NMT is not safe due to the limited existing facilities, high freight volumes and unsafe scholar transport.

The transport needs of the municipality can be summarised as follows: improve pedestrian facilities and improve learner transport facilities at and around schools.

7.3 Drakenstein local municipality

The Drakenstein local municipality lies north of the Stellenbosch local municipality and west of the Witzenberg municipality.

The Drakenstein local municipality includes a number of towns:

- Paarl
- Wellington
- Hermon
- Gouda
- Saron

The Drakenstein municipality has a number of rural villages (such as Hermon and Simondium) but has a significant proportion of its population in the larger towns of Paarl and Wellington. Due to the bulk of the population residing in Paarl and Wellington and the spatial gap between these two towns and the others, it is noted that there is a stronger functional relationship between Hermon, Gouda and Saron with towns outside the municipal area such as Wolseley and Tulbagh.

Similarly to the other municipalities, the main source of public transport is minibus taxis and the rail service. The minibus taxis primarily operate within the municipal area, with few services extending beyond Stellenbosch local municipality. Metrorail provides a number of daily services between Wellington, Paarl and Cape Town. A number of long distance bus operators pick up passengers within Paarl.

The public has indicated a number of problems and issues within the district, such as the lack of safety, long waiting times, better integration needed between modes, illegal operators and lack of law enforcement.

In recent years Drakenstein has also experienced an increase in heavy freight vehicles as Paarl expanded its industrial areas.

In terms of transport needs, it was identified that an improvement of existing public transport infrastructure is required as well as the provision of NMT facilities.

7.4 Langeberg local municipality

The Langeberg local municipality lies east of the Stellenbosch local municipality and south of the Breede Valley municipality.

The Langeberg local municipality includes a number of towns:

- Robertson
- Ashton
- Montagu
- McGregor
- Bonnievale

Langeberg is also comprised of a number of rural settlements:

- Zolani
- Ashbury
- Happyvallei

Within Langeberg, the only public transport services currently operating are minibus taxi services. Although there is an existing railway line, this is only used for freight movement and not for the transport of passengers. Most of the public transport operations take place within the local municipality, with commuters moving between the main towns mentioned above. In Langeberg only one formal public transport facility exists which is in Zolani. However, this taxi rank is not being used.

The R60 and R62 roads carry significant volumes of freight traffic moving between the N2 and N1.

The general public has expressed their main issues as the affordability of public transport fares, a lack of NMT facilities, safety concerns around scholar movement and a lack of public transport infrastructure and facilities.

The main priorities for Langeberg are improving existing NMT infrastructure and improving the safe transport of learners.

7.5 Witzenberg local municipality

The Witzenberg local municipality lies east of the Drakenstein local municipality and north of the Breede Valley municipality.

The Witzenberg local municipality includes a number of towns:

- Ceres

- Wolseley
- Prince Alfred
- Tulbagh
- Op-die-Berg

Witzenberg is also comprised of a number of rural settlements, namely:

- Warm Bokkeveld
- Koue Bokkeveld
- Agter-Witzenberg

Within the Witzenberg municipal area the primary modes of public transport are minibus taxi and rail. Non-motorised transport also plays a significant role within the municipality.

The public transport operations are also impacted by seasonal demand related to the agricultural sector, with an increase in demand taking place during the harvest season. This results in more frequent minibus taxi trips between the main service centres and the farming areas.

The passenger rail service operating within the municipal area is limited to one morning and one afternoon service between Wolseley and Cape Town. Currently a freight rail service is operated between Ceres and Prince Alfred Hamlet. It is envisaged that this will become a passenger service in future.

Witzenberg also has issues related to heavy vehicle movement through the town. The freight traffic experienced within the district is primarily vehicles travelling towards Cape Town or the N7.

The needs assessment identified projects related to NMT and additional public transport services during the fruit harvesting season.

7.6 Stellenbosch Local Municipality

The following has been extracted from the Executive Summary of the Stellenbosch CITP (2016-2021).

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 was prepared in accordance with the guidelines and requirements of the Department of

Transport and is a Sector Plan of the Stellenbosch Municipality's Integrated Development Plan (IDP).

The CITP covers the period 2016 – 2021 and has been approved by Town Council for submission to the MEC responsible for Transport and Public Works.

The CITP has been prepared in consultation with public meetings of interested and affected parties.

2. TRANSPORT VISION AND OBJECTIVES

The transport **VISION** stated in the CITP is:

“A demand-managed, sustainable, balanced and equitable transport system that allows for the basic mobility needs of individuals to be met, is affordable, operates efficiently, offers choice of transport modes, 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:

- Investment
- Sustainability
- Safety
- Integrated 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

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 and public transport linkages 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 continued development of Non Motorised Transport (NMT) infrastructure and networks to reduce the demand for private car travel and improve the liveability of neighbourhoods and communities within the area.
- The rail system should remain the backbone of the transport system in the functional region, therefore 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 pedestrians and non-motorised transport 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 and the provision of alternative routes and corridors
- 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 that can be prioritized for inclusion 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 consultation 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 public transport 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 with fixed timetables
- A new 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
- 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

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

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

- An application for an OL is submitted to the PRE and is referred to the Municipality.

- The OL application is circulated to the appropriate Departments internally within the Municipality.
- 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

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.

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, of which one 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 inbound traffic volume which does not significantly affect 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 is available to everyone 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.

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

11.2 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 commuters 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 OF 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
- **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 comprises an average spend over the first three years (2016/17 – 2020/21) of R 277 000 000, 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).

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.

8 FUNDING STRATEGY AND SUMMARY OF PROJECT BUDGETS

8.1 Introduction

This chapter serves to illustrate the proposed funding strategy which looks at the current funding sources for transport related improvements. This chapter will also summarise the 5 year annual municipal transport budget and programme for each local municipality. These summaries will include prioritisation of projects based on the municipal transport needs and the available budgets.

Some of the key focus areas that require funding are in terms of basic needs, such as maintenance of roads and provision of roads and related infrastructure, implementation of a safe, affordable and convenient public transport system and the provision of a safe environment for motorised transport and NMT.

Municipalities have various potential sources of funding available to them. These funding sources can be either public funding through internally generated funding (such as property rates and taxes) or national/ provincial government allocations or private funding through value capturing, public private partnerships or loans.

8.2 Summary of Project Proposals

The tables that follow are transport-related budgets provided by the local municipalities. Priorities are implied in the year(s) for which budget has been allocated. The sources of funding beyond municipal budgets are essentially the same as recorded in the previous DITP (2011-2016).

It should be noted that the Langeberg municipality has allocated no funding to transport related services for the 2015/16 financial year with a strong likelihood that no budget will be allocated to transport for the subsequent 3 year period. The Langeberg municipality has allocated funding to services which are a much higher priority.

The transport budgets of the local municipalities indicate that large portions of funding have been planned for road infrastructure improvements.

Breede Valley has budgeted, amongst others, for road network improvements and a bus route. Breede Valley budget also suggests that many of the transport projects which appear on the budget do not have funding for the 2015/16 financial year or subsequent years.

Witzenberg has budgeted primarily for road network improvements.

Drakenstein has budgeted, amongst others, for road network improvements and upgrading of existing sidewalks.

8.2.1 Breede Valley

Item	Description	Funding Source	Total Funded budget 2015/16 (Rands)	Budget Expectation 2016/2017 (Rands)	Budget Expectation 2017/2018 (Rands)
1	De Doorns: Rehabilitation of Municipal Roads (MIG 210857)	National Government: MIG (DORA)	181 950		
2	De Doorns: Rehabilitation of Municipal Roads (Counter Funding)	Projects (MIG Counter Funding)	1 888 832		
3	Rawsonville: Rehabilitation of Municipal Roads (MIG 212168)	National Government: MIG (DORA)	100 350		
4	Rawsonville: Rehabilitation of Municipal Roads (Counter Funding)	Projects (MIG Counter Funding)	702 554		
5	Worcester: Rehabilitation of Municipal Roads (MIG 212170)	National Government: MIG (DORA)	1 811 708		
6	Worcester: Rehabilitation of Municipal Roads (Counter Funding)	Projects (MIG Counter Funding)	2 000 000		
7	Avian Park Roads	Projects New	2 000 000		
8	Zwelethemba IDT Roads	Projects New	2 000 000		
9	Hex Industria Roads	Projects New	1 250 000		
10	HOP Land Roads - Touws River	Projects New	1 250 000		
11	De Doorns East Roads	Projects New	1 250 000		
12	Truck with tipper load body (4 Ton, Diesel)	Furniture and Equipment	616 025		
13	Roads & Stormwater	Projects New	144 000		
14	Roads	Projects New	156 000		
15	Touws River: Rehabilitation of Municipal Roads (MIG 212170)	National Government: MIG (DORA)	1 971 992		
16	Bus route	Projects New	3 072 849		
17	Embayment busses: Noble Street	Projects New	300 000		
18	Computers (Replacement of 2 computers)	UNFUNDED NEW REQUESTS		0	0
19	Traffic Circle (High and Louis Lange Streets)	UNFUNDED NEW REQUESTS			

Item	Description	Funding Source	Total Funded budget 2015/16 (Rands)	Budget Expectation 2016/2017 (Rands)	Budget Expectation 2017/2018 (Rands)
20	Equipment	UNFUNDED NEW REQUESTS		0	0
21	Resealing of Municipal Roads (MIG) - Rawsonville	National Government: MIG (DORA)		0	0
22	Resealing of Municipal Roads (Counter Funding to MIG) - Rawsonville	Projects (MIG Counter Funding)		0	0
23	Resealing of Municipal Roads (MIG) - Worcester	National Government: MIG (DORA)			
24	Resealing of Municipal Roads (Counter Funding to MIG) - Worcester	Projects (MIG Counter Funding)		0	0
25	Resealing of Municipal Roads (MIG) - De Doorns	National Government: MIG (DORA)		0	0
26	Resealing of Municipal Roads (Counter Funding to MIG) - De Doorns	Projects (MIG Counter Funding)		0	0
27	Resealing of Municipal Roads (MIG) - Touws River	National Government: MIG (DORA)		0	0
28	Resealing of Municipal Roads (Counter Funding to MIG) - Touws River	Projects (MIG Counter Funding)		0	0
29	Avian Park Roads	UNFUNDED NEW REQUESTS		0	0
30	Zwelethemba IDT Roads	UNFUNDED NEW REQUESTS		0	0
31	Hex Industria Roads	UNFUNDED NEW REQUESTS			
32	Parking Bays at VGK Church (Fisher & Van Huysteenlaan)	UNFUNDED NEW REQUESTS		0	0
33	HOP Land Roads - Touws River	UNFUNDED NEW REQUESTS		0	0
34	De Doorns East Roads	UNFUNDED NEW REQUESTS			
35	Upgrading of Gravel Roads	UNFUNDED NEW REQUESTS			

Item	Description	Funding Source	Total Funded budget 2015/16 (Rands)	Budget Expectation 2016/2017 (Rands)	Budget Expectation 2017/2018 (Rands)
36	Upgrading of Gravel Roads	UNFUNDED NEW REQUESTS		0	0
37	Upgrading of Gravel Roads	UNFUNDED NEW REQUESTS			
38	Upgrading of Gravel Roads	UNFUNDED NEW REQUESTS		0	0
39	Bus Route (MIG 201624 - Counter funding)	Projects (MIG Counter Funding)			
40	Fairway Heights Access Road (Trim Park)	UNFUNDED NEW REQUESTS		250 000	0
41	Rehabilitation of Leipoldt Avenue from Robertson Road to Fisher Street	UNFUNDED NEW REQUESTS		0	0
42	Rehabilitation of Leipoldt Avenue from Fairbairn to Grey Street	UNFUNDED NEW REQUESTS		0	1 000 000
43	Rehabilitation of Leipoldt Avenue from Fisher to Fairbairn Street	UNFUNDED NEW REQUESTS		300 000	0
44	Rehabilitation of Leipoldt Avenue from Grey to Le Seuer Street	UNFUNDED NEW REQUESTS			
45	Roads	UNFUNDED NEW REQUESTS		0	65027138
46	Embayment - 4 busses at Breerivier Senior Secondary School, Noble Street	UNFUNDED NEW REQUESTS			
47	Roads	UNFUNDED NEW REQUESTS			
48	Worcester Eastern Bypass (Roberson Road to N1)	UNFUNDED NEW REQUESTS		250 000	250 000
49	Providing pedestrian and cycle path shelters in Worcester	UNFUNDED NEW REQUESTS		5 000	5 000
50	Re-align pedestrian crossing over railway line in De Doorns	UNFUNDED NEW REQUESTS			

Item	Description	Funding Source	Total Funded budget 2015/16 (Rands)	Budget Expectation 2016/2017 (Rands)	Budget Expectation 2017/2018 (Rands)
51	Implement pedestrian sidewalk in De Doorns	UNFUNDED NEW REQUESTS			
52	Provision of Pedestrian Walkway between Le Sueur and Ranier Streets	UNFUNDED NEW REQUESTS			
53	Building of three raised pedestrian crossings across High Street, Worcester CBD	UNFUNDED NEW REQUESTS		5 200 000	5 400 000
54	Building of a raised pedestrian crossing across Stockenström Street, Worcester CBD	UNFUNDED NEW REQUESTS		50 000	50 000
55	Grader, Replacement of BVM 449	UNFUNDED NEW REQUESTS			
56	Digger Loader	UNFUNDED NEW REQUESTS			
57	Equipment: Roads and Storm Water	UNFUNDED NEW REQUESTS			
58	EQUIPMENT: DE DOORNS	UNFUNDED NEW REQUESTS		5 928 720	5 928 720
59	EQUIPMENT: TOUWS RIVER	UNFUNDED NEW REQUESTS			
60	Truck with tipper load body (4 Ton, Diesel)	UNFUNDED NEW REQUESTS			
61	Light Delivery Vehicle (1 Ton, LDV, 2000 Petrol) with canopy and accessories	UNFUNDED NEW REQUESTS		8 250 000	8 250 000
62	Truck with tipper load body (4 Ton, Diesel)	UNFUNDED NEW REQUESTS		0	0
63	Light Delivery Vehicle (1 Ton LDV) 2000 Petrol	UNFUNDED NEW REQUESTS		1 250 000	0

Item	Description	Funding Source	Total Funded budget 2015/16 (Rands)	Budget Expectation 2016/2017 (Rands)	Budget Expectation 2017/2018 (Rands)
64	Light Delivery Vehicle (1 Ton LDV) 2000 Petrol, Replacement of Nissan 1800 LWB_BVM 193	UNFUNDED NEW REQUESTS		0	0
65	Truck with tipper load body (4 Ton, Diesel), Replacement of Toyota Dyna Wipbak 4ton(kappie97/8)_BVM 207	UNFUNDED NEW REQUESTS		15 943 466	0
66	Truck with tipper load body (4 Ton, Diesel), Replacement of Toyota Dyna Tipbak_BVM 488	UNFUNDED NEW REQUESTS			
67	Tractor, Replacement of International Trekker_BVM 820	UNFUNDED NEW REQUESTS		0	0
68	Truck with tipper load body and hydraulic lift (Dounle Cab, 4 Ton, Diesel), Replacement of Isuzu vragmotor_BVM 901	UNFUNDED NEW REQUESTS			
Total			20 696 260	37 427 186	85 910 858

8.2.2 Drakenstein

New / Replacement of Assets	Capital Item Description	2015/2016 Revised Capital Budget	2016/2017 Revised Capital Budget	2017/2018 Revised Capital Budget	2018/2019 Revised Capital Budget	2019/2020 Revised Capital Budget
New	STREET LIGHTING: HERMON	-	185 349	-	-	-
New	STREET LIGHTING: GOUDA	-	447 957	-	-	-
New	BUILDINGS: OFFICE ALTERATIONS: MARKET STREET	100 000	150 000	200 000	-	-
New	BUILDINGS: OFFICE ACCOMMODATION (BLAKE STREET)	-	-	-	-	360 000
New	DETAILED DESIGN- BRB & OOSBOSCH	1 491 228	-	-	-	-
New	DETAILED DESIGN- BRB & OOSBOSCH	3 508 772	-	-	-	-
Replacement	UPGRADE EXISTING SIDEWALKS (DRAKENSTEIN)	7 500 000	600 000	600 000	850 000	1 000 000
Replacement	UPGRADE SIDE WALKS (WARD PROJECT)	2 500 000	2 500 000	2 700 000	2 800 000	3 000 000
New	FENCING: HUGENOTE PARKING AREA	130 000	-	-	-	-
Replacement	PROCLAIMED AND MAIN ROADS UPGRADES	9 376 409	10 488 068	7 605 944	7 636 932	8 345 984
New	VERSAILLES STREET WELLINGTON CHANNEL	-	1 000 000	-	-	-
Replacement	REPAIR SLIP JAN PHILIPS	1 500 000	3 000 000	3 000 000	3 000 000	3 000 000
Replacement	UPGRADING OF GRAVEL TO PAVED ROADS (SARON / GOUDA)	4 000 000	5 000 000	5 000 000	5 000 000	6 000 000
Replacement	UPGRADING GENL HERTZOG-WELLINGTON	1 000 000	-	-	-	-
Replacement	RECONSTRUCTION OF DROMMEDARIS STR	4 000 000	4 000 000	5 000 000	-	-

New / Replacem ent of Assets	Capital Item Description	2015/2016 Revised Capital Budget	2016/2017 Revised Capital Budget	2017/2018 Revised Capital Budget	2018/2019 Revised Capital Budget	2019/2020 Revised Capital Budget
Replacem ent	RECONSTRUCTION OF CECILIA STREET	-	-	5 000 000	8 000 000	-
Replacem ent	REFURBISHMENT OF STREETS & STORMWATER DEPOT	2 000 000	5 000 000	4 000 000	4 000 000	4 000 000
Replacem ent	RECONSTRUCTION OF STREETS	2 000 000	4 000 000	6 000 000	6 000 000	4 500 000
New	TRAFFIC CALMING MAIN STREET PAARL & WELLINGTON	350 000	240 000	-	-	-
New	TRAFFIC CALMING (DRAKENSTEIN)	1 400 000	400 000	400 000	500 000	800 000
New	UPGRADE JAN PHILLIPS MOUNTAIN DRIVE (GEOTECHNICAL REPORT INCLUDED)	1 500 000	-	-	-	-
Replacem ent	REFURBISH STORM WATER SYSTEMS (DRAKENSTEIN)	6 000 000	7 500 000	7 500 000	7 500 000	8 000 000
New	CONSTRUCT VAN DER STEL STREET (BETWEEN ABBATOIR AND KLEIN DRAKENSTEIN)	-	-	-	4 000 000	12 000 000
New	PAVING OF PARKING AREAS (DRAKENSTEIN)	-	1 000 000	500 000	500 000	500 000
New	PAARL GATEWAY PROJECT (MAIN ENTRANCES)	2 500 000	2 500 000	-	-	-
New	RAMPS FOR DISABLED (SIDEWALKS)	98 656	15 000	15 000	15 000	15 000
New	STREET NAME SIGNS (DRAKENSTEIN)	140 000	45 000	50 000	50 000	50 000
Replacem ent	CONSTRUCTION OF STOKERY ROAD, WELLINGTON (Transport)	8 070 175	-	-	-	-
New	TRAFFIC LIGHTS (DRAKENSTEIN)	1 600 000	1 600 000	2 880 607	2 000 000	2 000 000
Total		60 765 240	49 671 374	50 451 551	51 851 932	53 570 984

8.2.3 Langeberg

No municipal budget allocated to transport infrastructure or services.

8.2.4 Witzenberg

Directorate	Department	Project Description	Funding Source	Budget 2011/15/16	Budget 2016/2017	Budget 2017/2018
Community	Traffic	Fire Arms	CRR	R 100 000.00	R -	R -
Community	Traffic	Vehicle replacement programme	External Loans	R 420 000.00	R -	R -
Technical	Stormwater	Vredebes Housing Stormwater	HOUSE	R -	R 12 000 000.00	R 9 500 000.00
Technical	Stormwater	Network - Stormwater upgrading	CRR	R 150 000.00	R 200 000.00	R 220 000.00
Technical	Stormwater	Professional Fees for Rural Development Projects	CRR	R 200 000.00	R -	R -
Technical	Roads	Traffic Calming	CRR	R 200 000.00	R 220 000.00	R 250 000.00
Technical	Roads	Vredebes Housing Roads	HOUSE	R -	R 12 000 000.00	R 9 500 000.00
Technical	Roads	Skoonvlei Upgrading of Roads	CRR	R 3 800 000.00	R -	R -
Technical	Roads	Vehicle replacement programme	External Loans	R 230 000.00	R -	R -
Technical	Roads	Jackhammers	CRR	R 80 000.00	R -	R -
Technical	Roads	Vehicle replacement programme	CRR	R -	R 800 000.00	R -
Technical	Roads	Upgrading Roads - Vredebes	MIG	R -	R -	R 5 000 000.00
Technical	Roads	Bella Vista Housing Bulk Roads	MIG	R -	R -	R -

Directorate	Department	Project Description	Funding Source	Budget 20115/16	Budget 2016/2017	Budget 2017/2018
Technical	Roads	Network - Street	CRR	R 3 000 000.00	R 3 000 000.00	R 3 000 000.00
Technical	Roads	Equipment	CRR	R -	R 600 000.00	R -
Technical	Roads	Professional Fees for Rural Development Projects	CRR	R 500 000.00	R 600 000.00	R -

Annexure A: Enlarged Maps

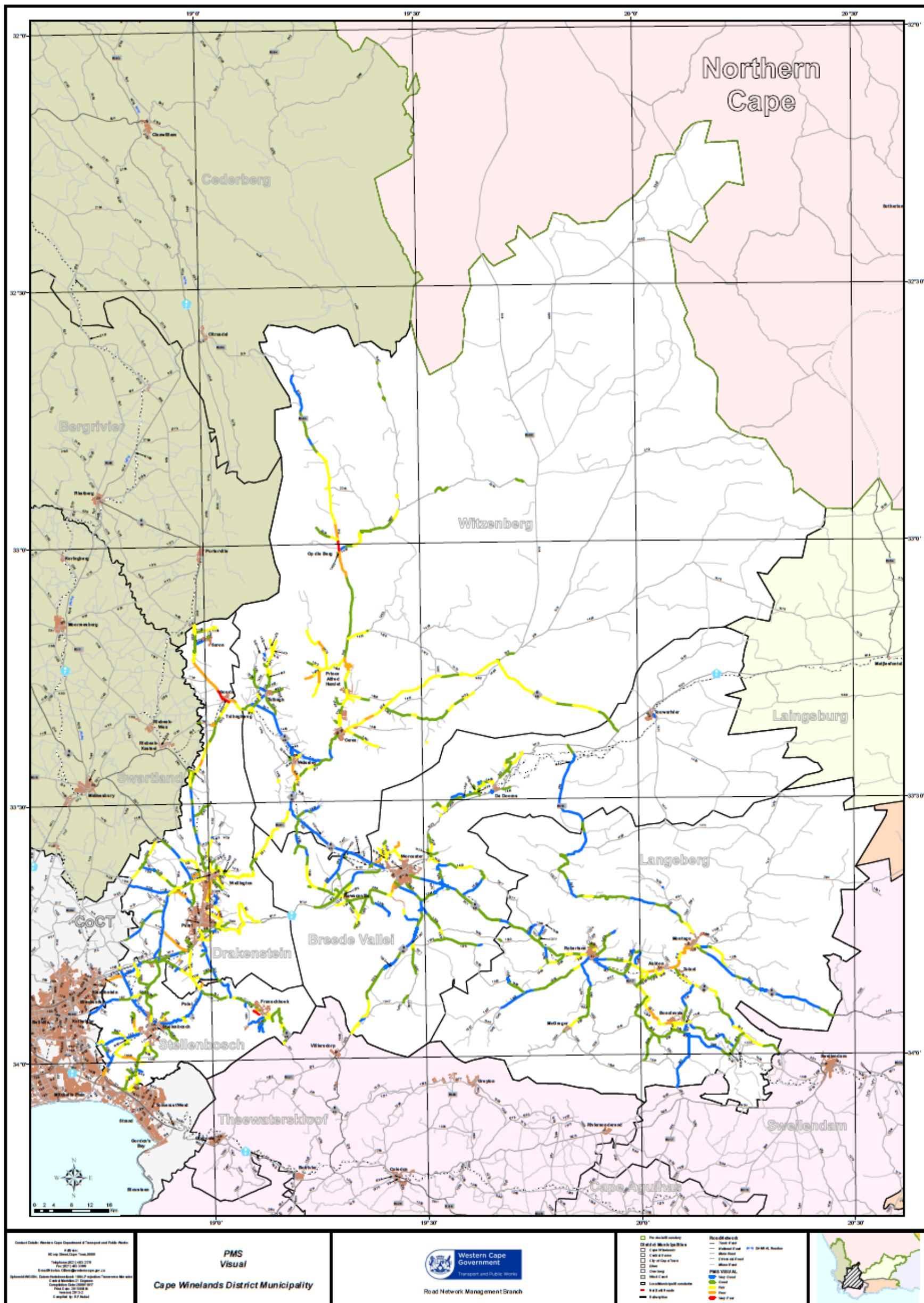


Figure Annexure A-1 Paved Road Condition of Provincial Roads (Enlarged)

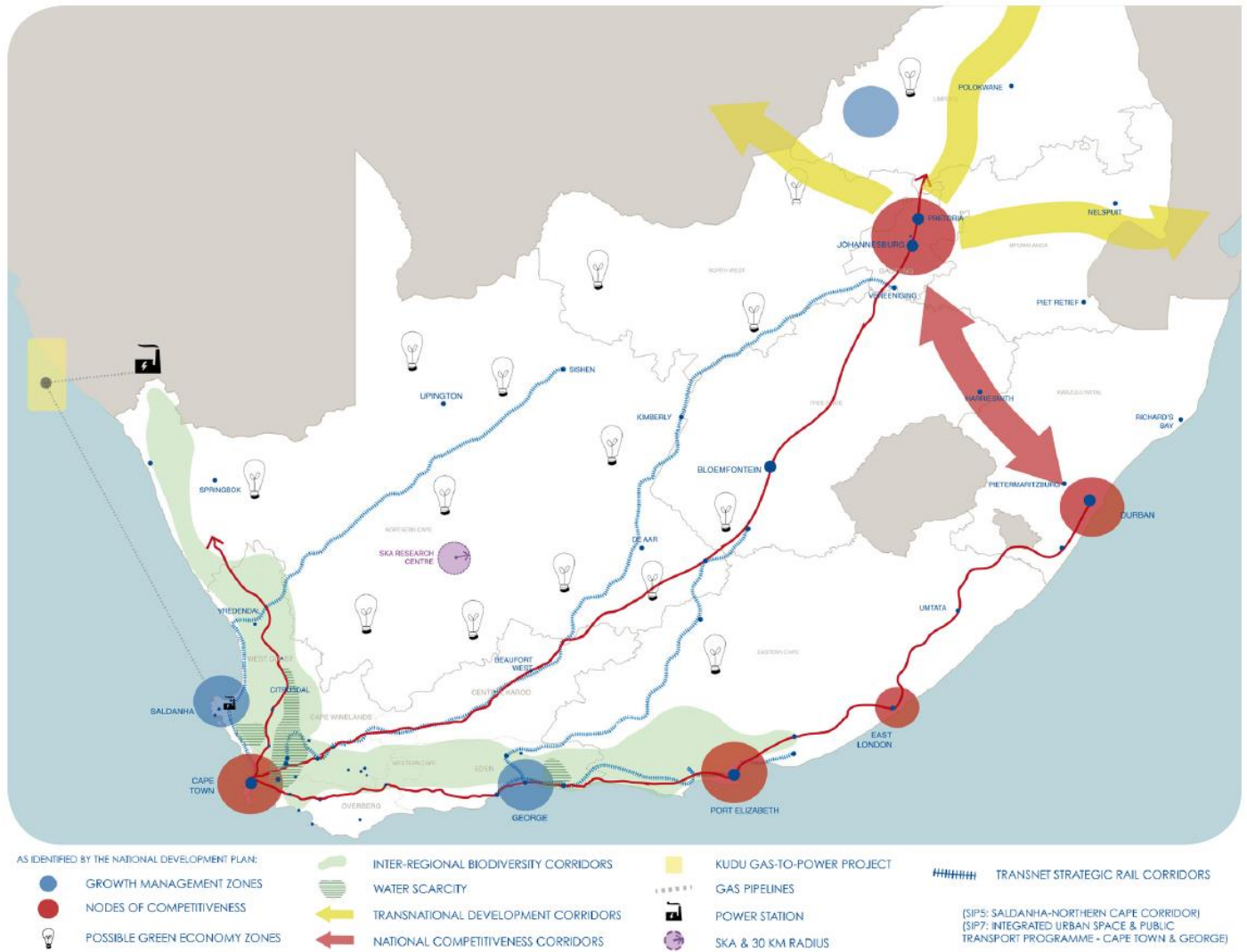


Figure Annexure A -3 Inter- and Intra- Provincial Spatial Initiatives based on NDP and other National Strategies (Enlarged)

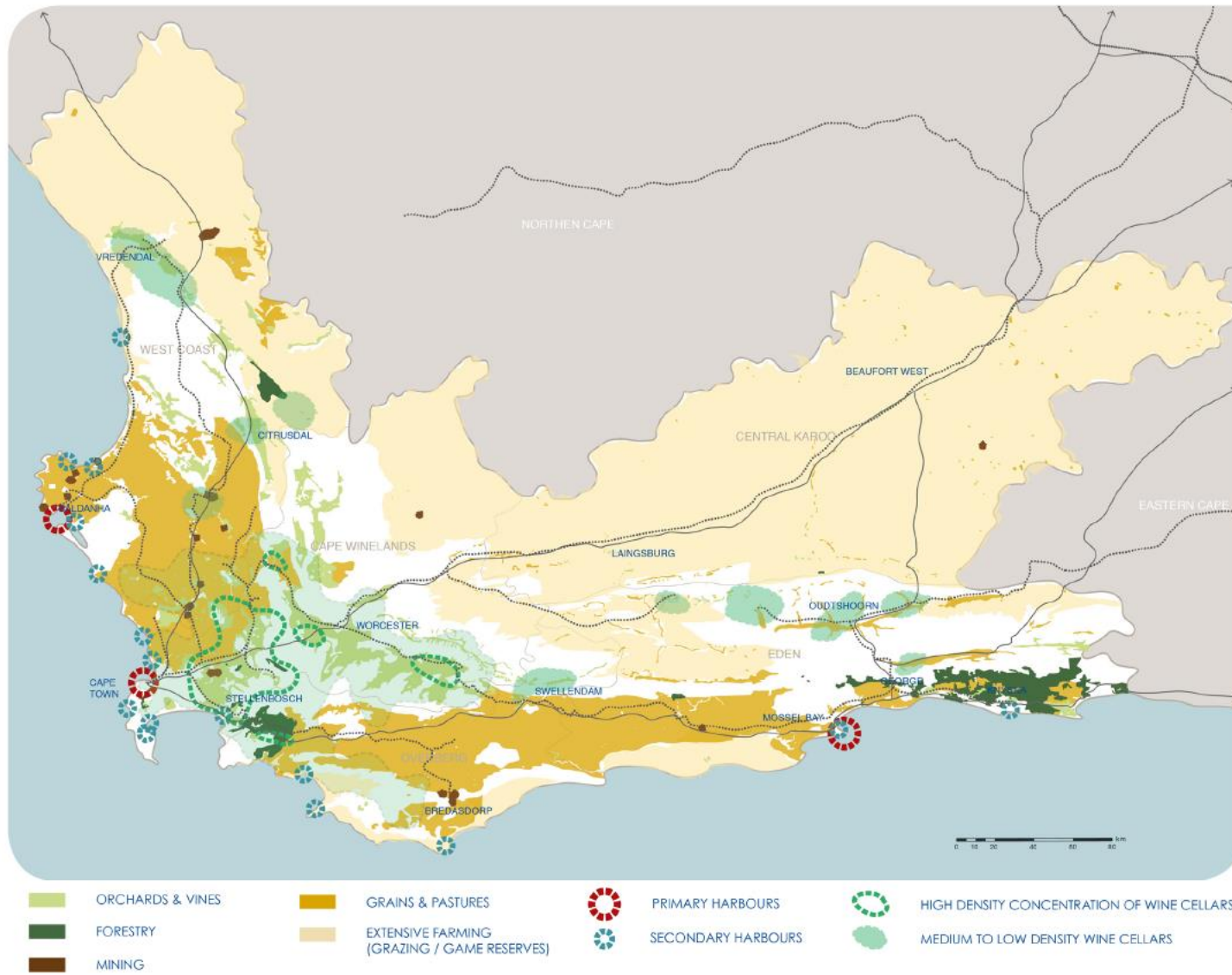


Figure Annexure A -4 Western Cape Province - Primary Sectors (Agriculture, Fishing, Forestry and Mining) (Enlarged)

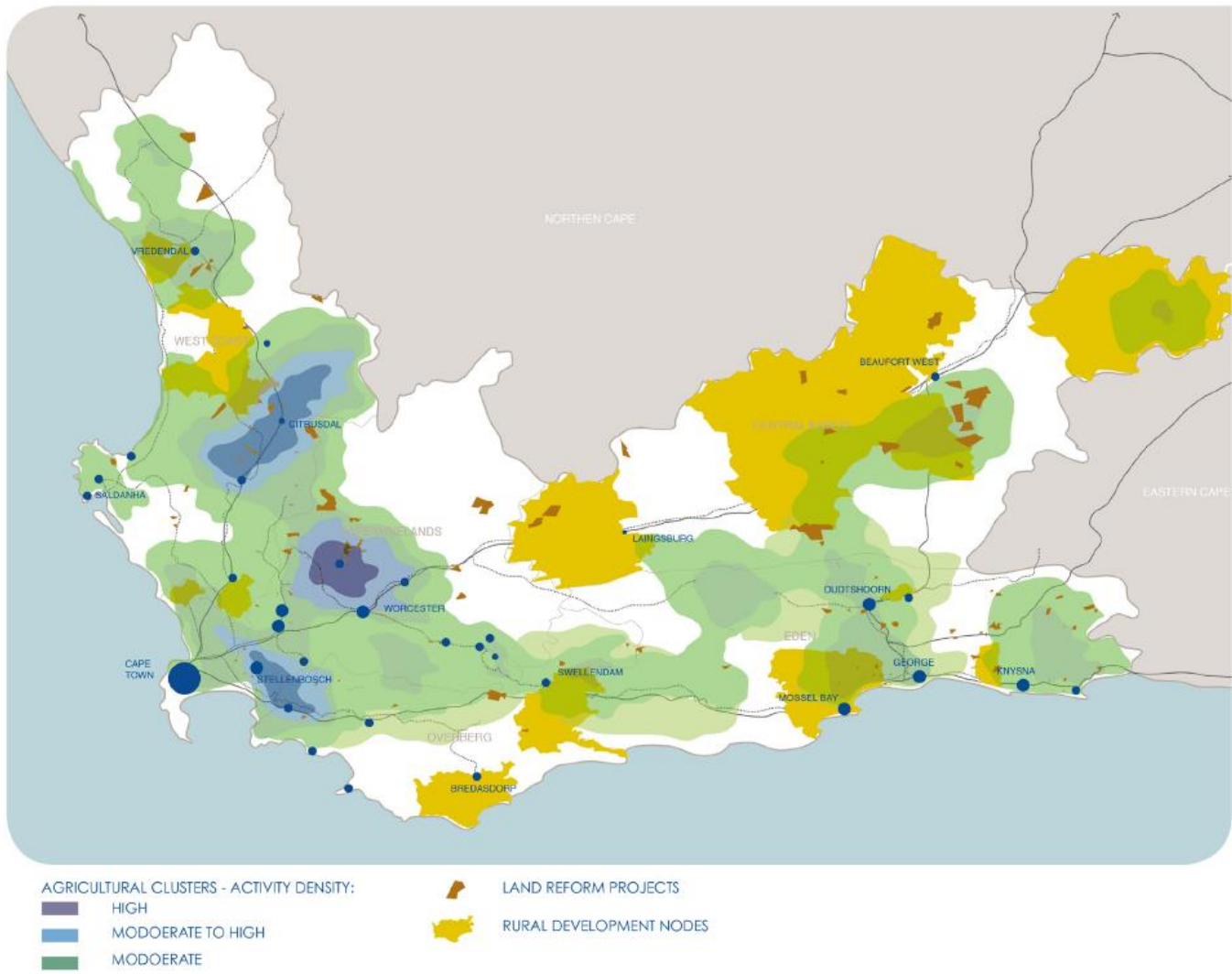


Figure Annexure A -5 Western Cape Province - Primary Sectors (Agriculture, Fishing, Forestry and Mining) (Enlarged)

Annexure B: School Bus Routes

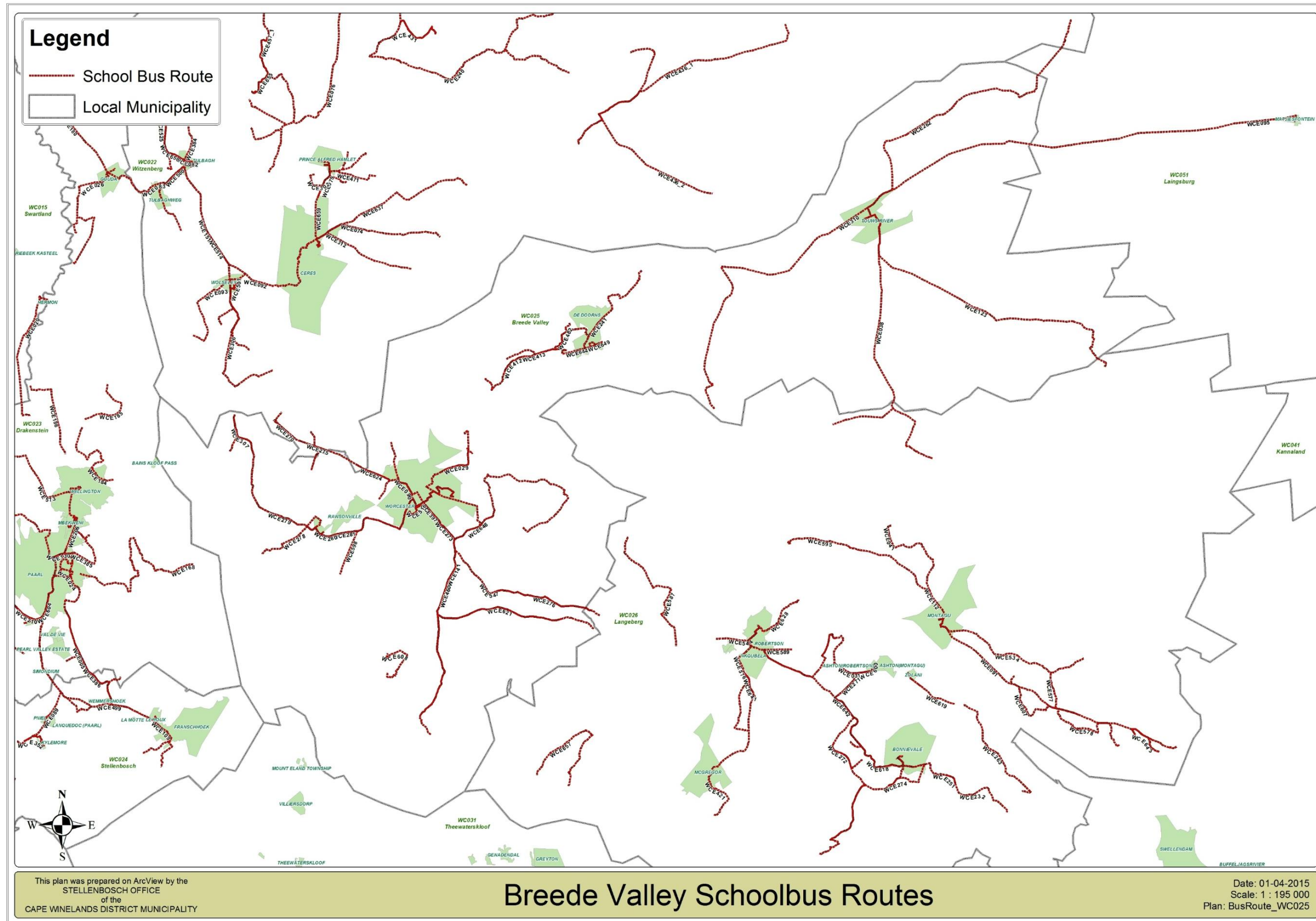


Figure Annexure B-1 Breede Valley School Bus Routes

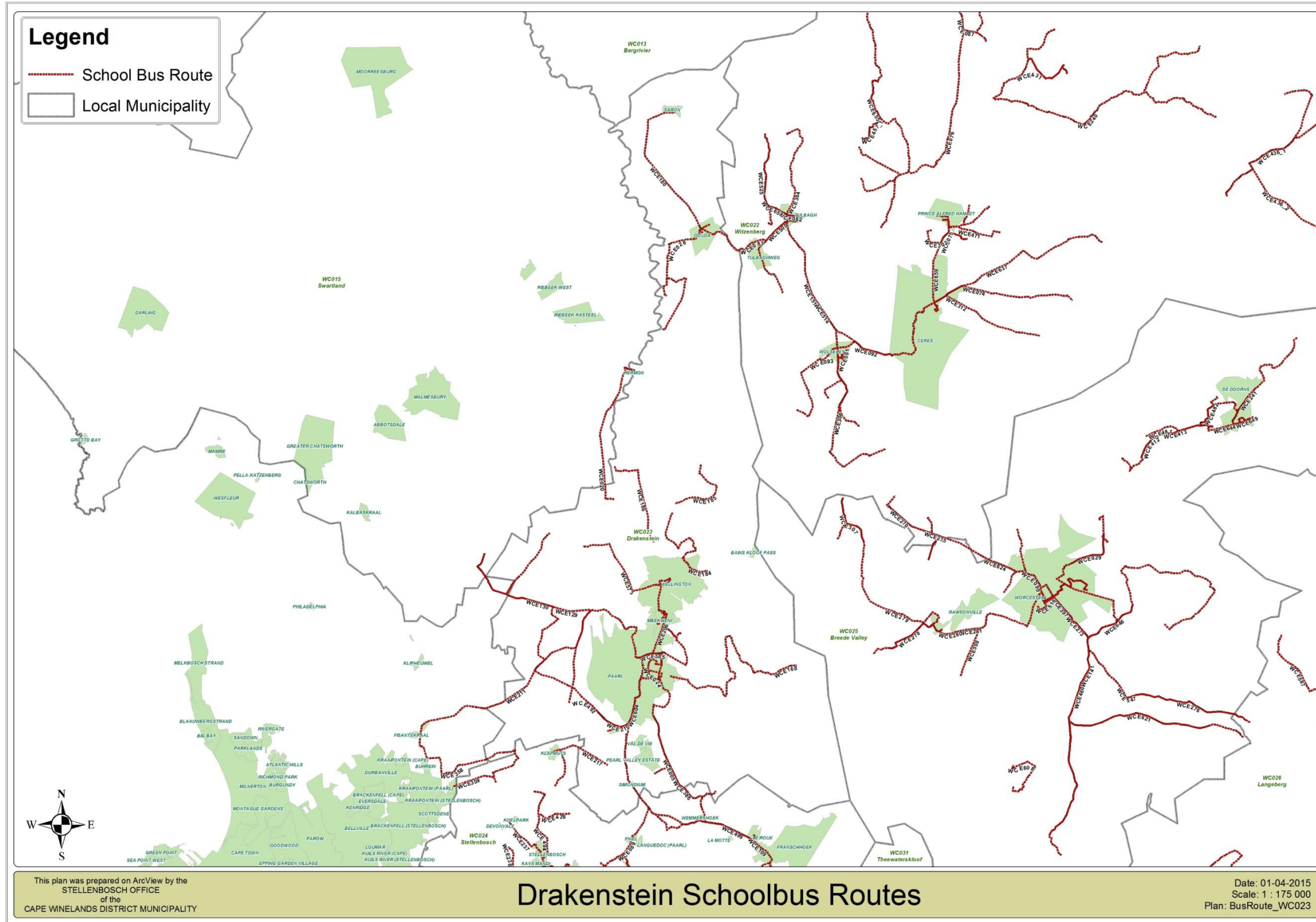


Figure Annexure B -2 Drakenstein School Bus Routes

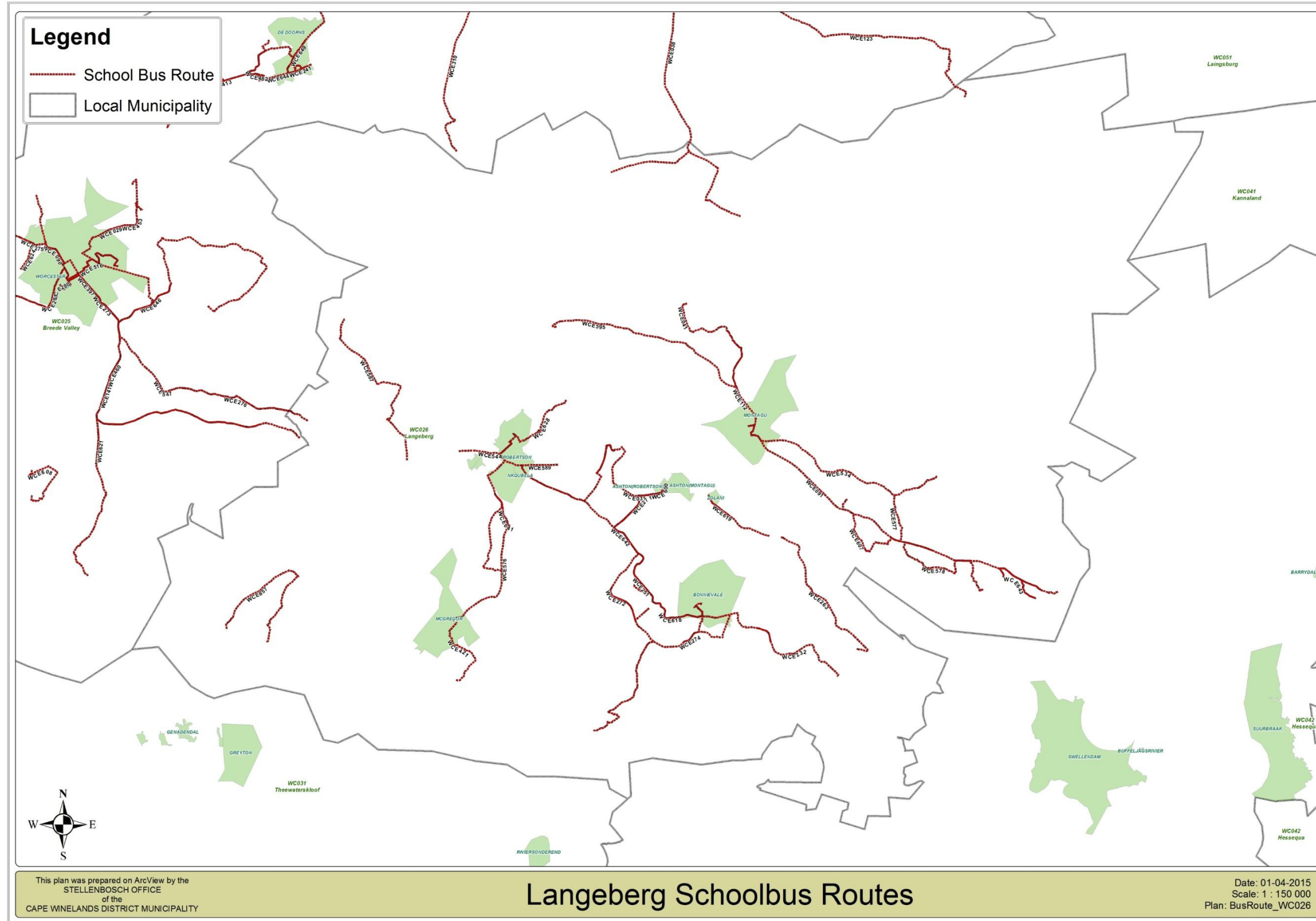


Figure Annexure B -3 Langeberg School Bus Routes

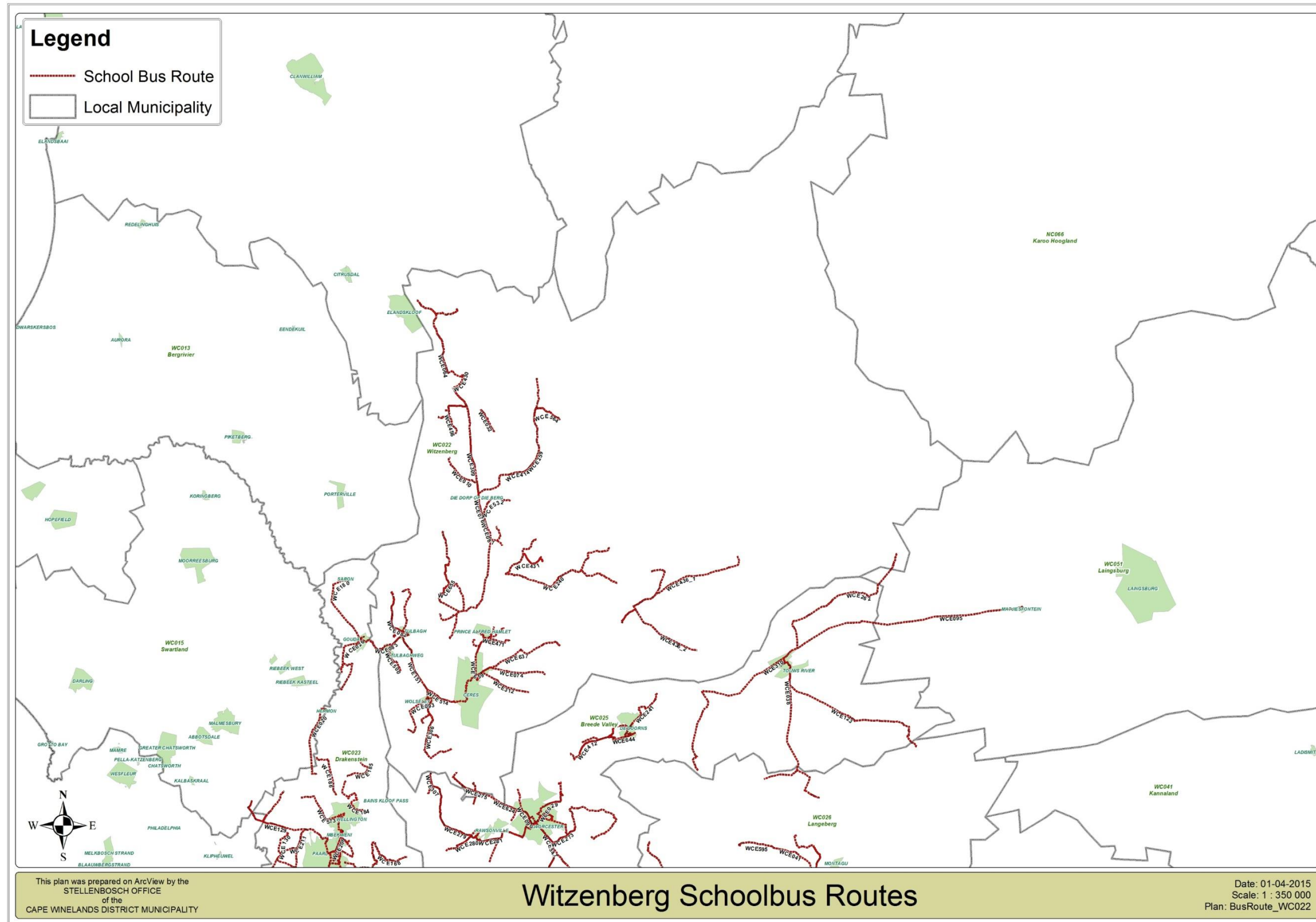


Figure Annexure B -4 Witzenberg School Bus Routes

Annexure C: Key Outcomes of Public Participation

Annexure D: Stakeholder Engagement Notes

Annexure E: Project Management Team Meeting Notes

Annexure F: Provincial Road Infrastructure MTEF Budget

Table Annexure F-1 WCG MTEF Budget for Rehabilitation/ Reconstruction: Cape Winelands District Municipality

PGWC - MTEF Budget with PROVINCIAL fund allocation according to Roads Infrastructure Branch

Rehabilitation / Reconstruction programme

Road	Dir	From km	To km	From	To	AADT	SN C	Rough IRI	Condition %	R CI %	Cracks % All/Wide	Commit	NPV Benefit	Rehabilitation/Reconstruction Cost (R'000)									
														2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
DR01050	P	0.00	6.00	Jct MR168 Lynedoch	Groene Rivier	6236	3.0	5.0	60	28	4 / 4		20 206 985		25 885								
DR01050	P	6.00	7.34	Jct MR168 Lynedoch	Groene Rivier	1168	2.7	5.6	65	38	0 / 0		3 210 449				4 330						
DR01053	P	7.60	7.68	Jct MR27 Welgegund	Jct MR27 Audacia	123	2.4	6.2	75	55	1 / 1		432 979	258									
DR01064	P	1.72	5.86	Jct V Riebeeck St Stellenbosch	Jonkershoek Forestry Reserve	1401	2.5	5.1	62	25	5 / 4		3 232 301			12 718							
DR01067	P	0.00	3.25	Jct. MR177 near Longlands	Stellenboschkloof	662	2.7	5.1	73	55	0 / 0		1 651 420				8 066						
DR01069	P	0.84	4.00	Jct Mun MR177 Stellenbosch	Bertram's Winery	2003	3.3	4.8	61	30	4 / 4		5 719 425				13 820						
DR01078	P	0.76	2.20	Jct Mun MR172 Stellenbosch	Rustenburg Bdy Cranford	2008	2.9	4.7	73	35	1 / 1		3 205 145				6 466						
DR01079	P	0.00	0.24	Jct MR172 Silvermyn	Jct DR1079 Kylemore	3387	3.9	4.1	91	87	0 / 0		4 646 458					1 453					
DR01085	P	0.00	3.47	Jct MR174 Koelenhof	Jct MR27 Kromme Rhee	3273	2.9	3.9	60	29	4 / 4		6 375 536				13 456						
DR01102	P	14.00	15.15	Jct MR217 near Oortmanspost	Jct Vissershok and Main Road	818	2.9	4.2	51	26	7 / 7		5 553 021			4 815							
DR01102	P	6.00	14.00	Jct MR217 near Oortmanspost	Jct Vissershok and Main Road	818	2.4	4.6	45	25	7 / 7		5 003 433				34 890						
DR01103	P	1.65	1.86	Jct. MR205 near Simonsvlei	Jct. MR189 Van Wyks River	604	3.3	3.8	38	25	7 / 7		1 232 916				727						
DR01108	P	2.00	6.82	Jct MR189 Van Wyks River	Jct MR27 Ruite Valley	1108	2.6	4.7	35	23	7 / 7		3 588 746				18 692						
DR01130	P	0.00	0.03	Jct DR1125 Schoone Oord	Jct DR1123 Vondeling	117	3.3	7.1	91	87	0 / 0		694 281				174						
DR01151	P	0.12	0.35	Jct TR23/2 Hermon	Hermon Railway Station	264	3.3	7.2	33	22	11 / 11		1 837 335								999		
DR01152	P	22.00	23.87	Jct TR23/2 Hermon	Wellington Municipal Boundary	1709	2.8	4.1	50	25	2 / 2		2 849 520				8 460						
DR01343	P	0.44	3.10	Jct Mun MR191 Franschoek	Jct OP05621 Farm La Dauphine	1738	2.0	3.9	70	30	1 / 1		2 770 289								18 206		
DR01351	P	0.00	1.13	Jct MR191 Lamotte	Jct DR1343 Franschoek	1558	2.9	4.7	49	25	7 / 7		2 585 842							6 828			
DR01437	P	0.00	0.10	Jct DR1435 Hex River	Access Hex River Station	529	3.3	5.9	88	89	0 / 0		2 482 087		387								
DR01486	P	0.00	0.45	Jct MR310 Wagen Drift	Jct De Keur St Op-Die-Berg	1571	2.1	3.9	68	30	2 / 2		2 006 519									4 344	
MR00025	P	3.67	3.98	Jct Lady Grey St Paarl	Jct MR218 Noorder Paar	14066	2.9	3.3	89	71	0 / 0		23 748 464				1 991						
MR00166	P	0.11	2.00	Jct MR165 Firgrove Stn	Jct MR27 near Zandberg	2295	2.7	5.5	42	23	7 / 7		8 052 963		7 329								
MR00166	P	2.00	4.71	Jct MR165 Firgrove Stn	Jct MR27 near Zandberg	2331	3.3	4.0	72	36	1 / 1		4 148 282				17 402						
MR00172	P	0.05	1.25	Jct Mun MR27 Stellenbosch	Jct MR191 Groot Drakenstein	12797	4.5	1.8	51	25	11 / 11		3 096 445		13 332								
MR00189	P	22.00	24.00	Jct Mun MR184 Bellville	Jct Mun MR201 Paarl	1963	3.2	4.3	91	90	0 / 0		6 001 230			8 192							
MR00189	P	12.34	16.00	Jct Mun MR184 Bellville	Jct Mun MR201 Paarl	1174	2.4	5.5	30	20	11 / 11		6 697 650			19 144							

MR0018 9	P	24.00	26.00	Jct Mun MR184 Bellville	Jct Mun MR201 Paarl	2914	3.0	3.0	91	90	0 / 0		4 658 037				10 341					
MR0018 9	N	31.48	32.84	(31.48)...	...(32.84)	4383	2.6	9.9	92	90	0 / 0		31 513 359				11 647					
MR0018 9	P	26.00	32.84	Jct Mun MR184 Bellville	Jct Mun MR201 Paarl	3340	3.1	3.4	91	90	0 / 0		5 669 758					34 617				
MR0019 1	P	0.00	2.00	Jct MR189 Paarl	Jct MR279 Rust River	5535	3.5	3.6	52	23	7 / 7		9 635 656			12 247						
MR0019 1	P	2.00	10.00	Jct MR189 Paarl	Jct MR279 Rust River	6361	3.0	3.7	48	23	7 / 7		53 773 800			52 515						
MR0020 1	P	12.00	14.00	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	3720	2.7	7.2	46	22	4 / 4		33 686 649			9 048						
MR0020 1	P	6.00	12.00	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	3568	3.7	6.1	53	23	7 / 7		20 978 119			37 487						
MR0020 1	P	36.00	40.00	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	1328	2.7	3.0	53	26	4 / 4		1 188 422				17 306					
MR0020 1	P	14.00	20.00	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	875	2.7	8.4	67	61	0 / 0		4 381 744				19 390					
MR0020 1	P	46.10	50.23	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	8381	3.2	3.6	43	21	11 / 11		27 252 668								35 863	
MR0020 1	P	56.92	74.59	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	3666	3.3	3.2	86	87	0 / 0		4 935 199								115 321	
MR0021 0	P	0.00	0.87	Jct Langenhoven Rd & TR9/2	Entrance to Hugenot Stn	5175	3.2	3.1	92	90	0 / 0		5 574 187								8 303	
MR0021 8	P	0.00	4.00	Jct MR25 Noorder Paarl	Jct MR27 Bordjie Outspan	3670	3.3	4.1	34	23	12 / 11	Yes	49 406 483			32 000						
MR0021 8	P	4.00	5.56	Jct MR25 Noorder Paarl	Jct MR27 Bordjie Outspan	2647	3.0	4.7	42	24	7 / 7	Yes	18 712 944				10 000					
MR0022 0	P	2.00	4.00	Jct TR25/1 Paarlse Pont	Jct TR25/1 Good Hope	1164	2.6	4.0	48	23	4 / 4		2 710 102				7 168					
MR0022 0	P	0.00	2.00	Jct TR25/1 Paarlse Pont	Jct TR25/1 Good Hope	1003	2.4	4.5	46	23	4 / 4		2 640 153								7 168	
MR0022 2	P	1.41	1.58	Jct Mun MR23 Wellington	Jct MR220 Zanddrift	2340	3.3	6.8	77	55	0 / 0		10 413 057				659					
MR0028 2	P	18.00	19.03	Jct NR2/4 Stormsvlei	Jct MR287 Bonnievale	1743	3.2	2.9	62	24	4 / 4	Yes	3 431 429			1 600						
MR0028 7	P	30.71	32.00	Jct MR31 Robertson	Jct MR288 Drew	1778	4.4	5.0	49	26	4 / 4		4 866 951			4 623						
MR0028 7	P	26.00	30.03	Jct MR31 Robertson	Jct MR288 Drew	2360	4.2	5.2	48	25	4 / 4		6 979 025				20 897					
MR0028 7	P	16.00	18.00	Jct MR31 Robertson	Jct MR288 Drew	2064	2.2	4.9	62	24	5 / 4		7 818 069								8 192	
MR0028 7	P	14.00	16.00	Jct MR31 Robertson	Jct MR288 Drew	2683	2.7	4.2	57	25	4 / 4		7 860 350								9 216	
MR0028 7	P	18.00	22.00	Jct MR31 Robertson	Jct MR288 Drew	1237	2.5	4.9	58	25	4 / 4		3 970 867								14 336	
MR0028 7	P	22.00	26.00	Jct MR31 Robertson	Jct MR288 Drew	1366	2.9	4.9	50	23	11 / 11		4 269 554								18 097	
MR0029 1	P	6.00	8.99	Jct TR32/1 Stockwell Stn	Jct Mun MR287 Bonnievale	1293	3.0	4.5	48	24	7 / 7		3 440 589				13 527					
MR0029 8	P	0.00	2.00	Jct TR30/2 Worcester	Jct MR299 Wyzersdrift	5148	3.0	4.2	52	23	4 / 4		12 178 924			9 149						
MR0029 8	P	2.00	4.00	Jct TR30/2 Worcester	Jct MR299 Wyzersdrift	5208	3.2	4.8	55	25	4 / 4		14 800 031			11 978						

MR0030 2	P	0.00	24.59	Jct NR1/2 Hartebeest River	Jct MR201 Kleine Berg	3908	3.7	3.1	52	23	4 / 4	Yes	61 622 473	52 000									
MR0030 3	P	0.00	0.34	Jct NR1/3 De Doorns	Jct NR1/3 Buffelskraal	4408	4.5	3.7	91	87	0 / 0		7 998 442					2 637					
MR0030 5	P	3.53	6.96	Jct TR22/1 Goedgevonden	Jct MR201 La Plaisante	2472	4.6	3.6	51	22	7 / 7		5 368 156			27 648							
MR0030 6	P	0.36	0.72	Jct Mun MR305 Wolseley	Jct Mun MR307 Wolseley	1954	3.6	4.2	80	65	0 / 0		3 695 707					1 475					
MR0031 0	P	12.00	20.00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	3145	2.7	3.2	51	33	4 / 4		5 910 303			66 328							
MR0031 0	P	38.00	44.00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	1234	2.0	4.0	28	21	11 / 11		4 621 573				26 011						
MR0031 0	P	44.00	50.00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	939	2.0	5.3	19	20	11 / 11		4 131 543					27 109					
MR0031 0	P	10.00	12.00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	5151	2.6	2.5	92	93	0 / 0		6 676 419							12 178			
OP0423 2	P	0.00	0.55	Jct MR166 near Normandie	Jct OP4233 at Property 123/259	629	3.3	4.8	66	31	0 / 0		1 070 749				1 216						
OP0423 6	P	0.00	2.67	Jct MR27 Klein Heldeberg	Jct DR1021 Eendrag	2066	3.6	4.8	73	47	0 / 0		3 822 586					8 202					
OP0524 7	P	0.00	0.94	Jct MR205 near Babylonstoren	Boundary at Backsberg	840	3.3	7.2	64	28	1 / 1		6 458 150				2 427						
Total														5225 8	2175 80	1948 74	1447 04	1993 80	1609 40	1900 6	1820 6	999	4344

Table Annexue F -1 WCG MTEF Budget for Reseal: Cape Winelands District Municipality

**PGWC - MTEF Budget with PROVINCIAL fund allocation according to Roads Infrastructure Branch
Reseal programme**

Road	Dir	From km	To km	From	To	AADT	SNC	Rough IRI	Condition %	R CI %	Cracks % All/Wide	Commit	NPV Benefit	Reseal Cost (R'000)									
														2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
DR01123	P	8.00	10.00	Jct TR25/1 Botter River Vallei	Jct MR174 Klipheuwel	564	3.0	2.8	68	46	1 / 1		244 794						3 438				
DR01154	P	3.85	3.91	Jct TR23/2 Sonquasdrift	Jct MR226 Riebeek Kasteel	284	3.3	3.4	73	68	0 / 0		515 839		57								
MR00023	P	1.64	4.00	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	6096	5.1	1.8	76	36	0 / 0		2 370 006		5 409						5 409		
MR00023	P	4.00	6.00	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	5701	5.0	1.8	84	38	1 / 0		2 235 742			4 202						4 202	
MR00023	P	6.00	18.00	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	5024	4.7	1.8	84	53	0 / 0		1 626 943				26 358						
MR00023	P	18.00	20.00	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	3973	4.0	1.8	86	47	1 / 0		1 850 430			4 202						4 202	
MR00023	P	20.00	22.00	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	3973	4.1	2.1	73	25	1 / 0		2 261 383		4 202						4 202		
MR00023	P	22.00	23.09	Jct Mun MR27 Wellington	Jct TR24/1 Hermon	3973	4.6	2.1	83	63	0 / 0		1 482 339				2 498						
MR00165	P	8.47	8.99	Jct MR116 Faure I/C	Jct MR166 Firgrove	12819	3.9	2.7	71	39	0 / 0		12 879 494	993									
MR00172	P	2.49	8.00	Jct Mun MR27 Stellenbosch	Jct MR191 Groot Drakenstein	8590	4.2	1.9	86	73	0 / 0		1 356 719								17 509		
MR00172	P	8.00	15.76	Jct Mun MR27 Stellenbosch	Jct MR191 Groot Drakenstein	8137	4.2	2.3	89	80	0 / 0		7 917 162								16 350		
MR00187	P	4.72	8.00	Jct Mun MR179 Bellville	Jct MR174 Koelenhof	13105	4.8	1.0	91	82	0 / 0		972 831								7 518		
MR00187	P	8.00	12.00	Jct Mun MR179 Bellville	Jct MR174 Koelenhof	9756	4.8	1.1	92	86	0 / 0		758 473								9 168		
MR00187	P	12.00	14.71	Jct Mun MR179 Bellville	Jct MR174 Koelenhof	9703	4.8	1.3	91	78	0 / 0		1 035 343								6 211		
MR00189	P	16.00	18.00	Jct Mun MR184 Bellville	Jct Mun MR201 Paarl	1794	2.8	3.6	58	36	4 / 4		1 174 128		3 438							3 438	
MR00191	P	10.00	21.88	Jct MR189 Paarl	Jct MR279 Rust River	8847	3.9	1.3	82	49	0 / 0		2 339 188			25 724						25 724	
MR00191	P	22.69	23.71	Jct MR189 Paarl	Jct MR279 Rust River	13476	3.2	1.3	61	31	4 / 4		3 762 372	2 143							2 143		
MR00191	P	26.02	28.00	Jct MR189 Paarl	Jct MR279 Rust River	2547	3.3	2.1	61	28	4 / 4		943 151		3 025							3 025	
MR00191	P	28.00	38.00	Jct MR189 Paarl	Jct MR279 Rust River	2252	2.9	1.7	78	54	0 / 0		565 896				13 370						
MR00191	P	38.00	41.95	Jct MR189 Paarl	Jct MR279 Rust River	1562	2.3	1.7	83	84	0 / 0		282 700								5 281		
MR00201	N	46.10	50.23	(46.10)... [56.92]...	...(50.23) ...[59.02]	8381	3.5	2.7	54	24	7 / 7		7 900 741	7 888									
MR00201	N	56.92	59.02	(46.10)... [56.92]...	...(50.23) ...[59.02]	8027	5.0	2.7	66	27	2 / 1		6 437 108		4 412								

MR0020 1	P	0.00	2.0 0	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	2208	4.8	2.9	71	24	2 / 1	1 003 057			3 820					3 820
MR0020 1	P	2.00	6.0 0	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	2208	4.4	2.8	72	25	2 / 2	895 708			7 640					
MR0020 1	P	40.0 0	42. 70	Jct TR22/1 Ceres	Jct MR191 Wemmershoek	1702	3.5	1.3	54	29	4 / 4	362 818	3 610						3 610	
MR0020 5	P	0.00	6.0 0	Jct MR27 Klapmuts	Jct MR191 Simondium	3675	2.9	3.0	83	59	0 / 0	5 559 129			8 022					
MR0020 5	P	6.00	8.6 2	Jct MR27 Klapmuts	Jct MR191 Simondium	3946	2.9	3.5	68	25	1 / 1	8 158 339		3 503						
MR0020 7	P	1.40	2.7 0	Jct Mun MR208 Paarl	Jct MR201 Vendome Firs	9654	3.7	3.3	65	25	2 / 2	12 087 774		2 235						
MR0021 3	P	10.7 9	20. 88	Jct MR188 Lichtenburg	Jct MR27 Bellview	2659	3.4	2.3	89	88	0 / 0	582 102							19 272	
MR0028 7	P	2.69	4.0 0	Jct MR31 Robertson	Jct MR288 Drew	3047	3.6	2.8	86	84	0 / 0	746 596							2 252	
MR0028 7	P	4.00	6.0 0	Jct MR31 Robertson	Jct MR288 Drew	3047	3.2	2.3	86	63	0 / 0	958 157				3 820				
MR0028 7	P	6.00	14. 00	Jct MR31 Robertson	Jct MR288 Drew	2826	3.7	2.6	85	69	0 / 0	975 310				15 280				
MR0028 8	P	14.0 0	16. 34	Jct TR32/1 Jan Harmansgat	Jct MR282 Bonnievale	550	2.9	2.4	71	30	1 / 1	127 187						3 129		
MR0028 9	P	16.0 0	18. 54	Jct MR287 Goudmyn	Jct MR282 Bonnievale	800	3.2	3.0	80	42	1 / 1	269 811				2 911				
MR0029 0	P	0.25	4.0 0	Jct Mun MR31 Robertson	Jct Smit St & DR1334 McGregor	1828	3.5	3.5	69	26	0 / 0	999 243			4 632					4 632
MR0029 0	P	4.00	6.0 0	Jct Mun MR31 Robertson	Jct Smit St & DR1334 McGregor	1126	3.4	3.4	60	25	4 / 4	592 508		2 292					2 292	
MR0029 0	P	16.0 0	18. 50	Jct Mun MR31 Robertson	Jct Smit St & DR1334 McGregor	1014	3.1	3.7	78	34	1 / 1	491 416		2 865					2 865	
MR0029 8	P	4.00	14. 50	Jct TR30/2 Worcester	Jct MR299 Wyzersdrift	4824	3.6	2.5	79	47	0 / 0	1 692 947			23 684					23 684
MR0029 8	P	20.4 5	20. 70	Jct TR30/2 Worcester	Jct MR299 Wyzersdrift	713	2.9	2.7	65	25	1 / 1	251 606		334						
MR0029 9	P	0.00	4.0 0	Jct MR302 De Breede River	Jct DR1398 Goudini Spa	749	3.7	2.5	83	45	1 / 0	164 292							6 112	
MR0029 9	P	4.00	5.1 3	Jct MR302 De Breede River	Jct DR1398 Goudini Spa	652	3.2	3.5	77	30	1 / 1	397 981			1 511					1 511
MR0029 9	P	8.45	9.8 5	Jct MR302 De Breede River	Jct DR1398 Goudini Spa	423	3.3	2.8	64	24	3 / 3	119 962			1 872					
MR0030 7	P	0.00	1.2 3	Jct TR22/1 Waverley	Jct Mun MR305 Wolseley	1874	3.4	3.5	56	24	1 / 1	1 037 419		1 645						1 645
MR0031 0	P	1.91	6.0 0	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	8274	2.2	2.6	58	23	4 / 4	19 356 894	9 374							
MR0031 0	P	6.00	8.0 0	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	5969	2.4	3.0	69	24	0 / 0	10 799 693		4 584						
MR0031 0	P	8.00	10. 00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	5466	2.4	3.2	54	21	5 / 4	11 247 869	4 202							
DR0116 8	P	0.00	4.8 6	Jct TR23/3 Halfmanshof	De Hoek Estates	357	3.9	3.3	56	27	5 / 4	173 658			6 498					
MR0031 0	P	52.0 0	58. 00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	800	2.0	2.6	56	29	1 / 1	456 202		8 022						
MR0031 0	P	66.0 0	68. 00	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	266	3.1	2.2	70	35	1 / 1	54 002							3 438	
MR0031 2	P	0.00	4.7 0	Jct TR22/1 Leeuw River	Jct DR1471 Oude Drostdy	1432	3.9	3.2	59	29	1 / 1	881 803		6 284						6 284

MR0031 3	P	0.40	4.8 9	Jct Mun MR312 Tulbagh	Tulbagh Weg Rly Stn	1574	4.4	2.7	84	56	1 / 0		348 163						10 291			
OP0423 4	P	0.00	1.1 6	Jct DR1039 & OP4233 Raithby	Bdy of Pty 502 near Tertia	673	3.3	2.0	80	69	0 / 0		71 093				1 108					
OP0522 6	P	0.00	0.2 2	Jct MR172 near Walcarmas	On Property 116/1 Glen Arum	65	3.3	2.3	69	30	1 / 1		12 677						252			
OP0525 5	P	0.00	1.4 1	Jct MR201 Loewenstein	De Hoop 838 Bdy lolille	1303	3.7	2.1	85	81	0 / 0		194 103						2 424			
OP0562 0	P	0.00	1.9 4	Jct DR1343 near Bourgogne	Farm Boundary near Hillside	499	2.2	3.8	55	24	4 / 4		260 685		2 594							2 594
OP0572 9	P	0.00	0.2 3	Jct OP5728 Carpe Diem	Protea	97	3.3	2.3	56	25	5 / 4		27 175			264						
OP0588 3	P	5.25	5.5 6	Jct DR1452 on Klipfontein	Pty 393 & 426 Welvaart Bdy	147	3.3	2.9	69	37	1 / 1		64 869					296				
DR0102 1	P	1.55	3.5 5	Jct Old Stellenbosch Rd S/West	Jct MR166 Firgrove Stn	4254	3.3	3.0	76	50	0 / 0		3 304 365		2 292							
DR0105 2	P	0.00	4.4 4	Jct MR168 Welmoed Estate	Jct OP05208 Veelverjaagt	1853	2.8	3.4	56	27	1 / 1		955 718		6 784							6 784
DR0105 3	P	0.81	4.2 0	Jct MR27 Welgegund	Jct MR27 Audacia	2718	3.0	2.0	85	84	0 / 0		387 837						5 827			
DR0105 6	P	0.00	1.3 2	Jct MR27 Jamestown	Boundary of Jamestown	3251	3.7	3.8	76	41	4 / 4		1 761 237		3 278							3 278
DR0106 9	P	4.00	5.7 6	Jct Mun MR177 Stellenbosch	Bertram's Winery	1022	3.7	3.7	73	39	1 / 1		646 430		2 017							2 017
DR0133 4	P	0.00	0.1 9	Jct Smit St & MR290 McGregor	Rietvallei Boundary	365	3.3	3.3	79	73	1 / 1		212 143			254						
DR0135 8	P	0.00	4.0 5	Jct TR31/2 Kraalbosch Vlake	Jct MR287 Spes Bona	676	3.4	3.4	75	37	1 / 1		320 207			4 641						
DR0135 9	P	0.00	3.0 0	Jct DR1358 Rouxvale	Jct DR1365 Sandvliet	284	2.7	2.6	72	31	1 / 1		47 799						4 011			
DR0136 3	P	0.00	2.8 4	Jct TR31/2 Riet Valley	Jct MR287 Goedemoed	464	4.2	2.8	84	74	0 / 0		89 781						3 255			
DR0137 9	P	8.26	8.5 9	Jct TR30/2 Reiersrus	Jct DR1375 Scherpenheuvel	374	2.6	3.8	69	35	4 / 4		298 061		378							378
DR0138 0	P	7.11	7.7 9	Jct TR31/1 De Norree	Jct DR1379 Moordkuil	177	3.3	2.6	77	53	1 / 1		33 723								909	
DR0138 5	P	0.88	2.4 4	Jct DR1118 & MR210 Drakenstein	Jct OP05631 Lot C Keerweder	870	3.0	2.8	78	68	0 / 0		166 695						1 788			
DR0138 8	P	0.00	3.1 2	Jct DR1118 Rem Lanquedoc	Jct DR1119 Eikerus	1411	2.9	3.5	48	26	8 / 7		958 841	4 171							4 171	
DR0138 9	P	0.00	2.0 0	Jct MR298 Boontjies River	Jct DR1386 Daschbosch River	522	2.8	2.6	75	32	1 / 1		119 418					2 674				
DR0109 0	P	4.00	6.7 3	Jct MR27 Klapmuts	Jct DR1098 Hoopenberg	943	2.5	3.2	61	23	1 / 1		313 283		4 171							
DR0138 9	P	2.00	4.0 3	Jct MR298 Boontjies River	Jct DR1386 Daschbosch River	403	2.6	2.5	78	33	1 / 0		66 680						2 714			
DR0139 0	P	4.00	6.9 3	Jct MR298 Pokkraal	Brandvlei Prison	703	5.0	2.1	81	46	1 / 1		107 230						5 037			
DR0139 4	P	10.0 0	11. 37	Jct TR30/2 Aan de Doorns	Jct DR1400 Efatta	470	2.7	2.7	79	31	0 / 0		178 063						1 570			
DR0139 8	P	0.00	4.0 0	Jct MR298 Rawsonville	Jct MR302 Witelsboom	2516	3.7	2.6	66	33	4 / 4		1 125 186		7 640							7 640
DR0139 8	P	4.00	8.0 0	Jct MR298 Rawsonville	Jct MR302 Witelsboom	1046	3.0	2.7	64	29	0 / 0		289 506		5 348							

DR01398	P	8.00	12.00	Jct MR298 Rawsonville	Jct MR302 Witelsboom	845	3.1	3.5	52	21	5 / 5	387 973	4 966									
DR01398	P	12.00	14.00	Jct MR298 Rawsonville	Jct MR302 Witelsboom	845	3.8	2.3	71	30	1 / 1	169 899			3 438							
DR01399	P	0.97	1.67	Jct MR298 Klipdrift	Jct V.Riebeeck St Rawsonville	475	3.0	2.9	76	36	1 / 0	104 708				802						
DR01400	P	18.00	20.00	Jct TR31/1 Nuy Station	Jct NR1/3 De Wet Station	504	2.8	3.1	68	28	1 / 1	202 659	2 292									
DR01409	P	0.00	0.49	Jct MR201 Mount Breeze	Jct DR1413 Groenfontein	575	3.6	3.0	76	27	2 / 2	170 861			655							
DR01416	P	1.80	5.63	Jct NR1/2 Worcester	Jct OP05706 Hartebeest River	467	3.1	3.3	65	42	1 / 1	131 172		4 701								
DR01426	P	2.00	4.33	Jct NR1/3 Glen Heatlie	Jct DR1400 De Wet	330	3.8	2.8	75	76	1 / 1	63 401					4 005					
DR01440	P	0.00	0.26	Jct Mun MR306 Wolseley	Jct OP5774 & OP5775 Elandskif	1898	3.3	3.7	71	38	0 / 0	2 989 815	397									
DR01447	P	0.00	7.85	Jct TR22/2 Ceres	Jct OP05848 Ezelsfontein	906	2.6	2.6	74	36	0 / 0	294 246			11 259							
DR01452	P	4.00	10.00	Jct TR22/2 Schapen River	Jct TR22/2 Hottentotkloof	432	3.5	2.8	77	64	0 / 0	109 382					8 022					
DR01458	P	6.00	8.00	Jct TR22/2 Rhodona	Jct MR310 Prince Alfred Hamlet	508	3.3	2.5	81	52	1 / 1	109 995				2 674						
DR01458	P	8.00	10.92	Jct TR22/2 Rhodona	Jct MR310 Prince Alfred Hamlet	652	2.7	2.5	63	25	3 / 2	172 008	3 904									
DR01468	P	0.00	4.00	Jct MR310 Koelefontein	Jct OP05873 Doornkraal Rd	581	2.7	2.6	65	31	0 / 0	177 615		4 584								
DR01468	P	4.00	6.00	Jct MR310 Koelefontein	Jct OP05873 Doornkraal Rd	546	2.8	2.8	61	38	1 / 1	246 899		2 292								
DR01471	P	0.00	5.43	Jct DR1459 Die Heuwel	Jct DR1477 Bloubank	529	3.1	2.9	71	40	0 / 0	146 315				6 605						
DR01108	P	0.00	2.00	Jct MR189 Van Wyks River	Jct MR27 Ruite Valley	1541	3.5	3.1	49	25	4 / 4	863 107	2 674						2 674			
DR01110	P	0.78	4.80	Jct Mun MR209 Paarl	MR201 Wateruintjies Vlei	1258	3.7	2.9	79	40	1 / 1	480 326			7 678							
DR01114	P	0.00	1.70	Jct. MR201 near Paris Oaks	Jct. DR1110 Paarl	2801	3.9	2.8	68	37	0 / 0	1 147 763	2 273						2 273			
DR01118	P	1.05	4.00	Jct Mun MR201 Daljosafat	Jct MR210 Palmietvlei	1876	3.6	3.4	71	34	1 / 0	893 288	3 944							3 944		
DR01118	P	4.00	6.31	Jct Mun MR201 Daljosafat	Jct MR210 Palmietvlei	2990	3.6	3.5	60	26	4 / 4	2 427 196	3 088						3 088			
Tot al													35471	87600	87434	54137	75006	66294	95630	13922	56798	71719

Table Annexue F -2 WCG MTEF Budget for Upgrade to Paved Standard: Cape Winelands District Municipality

PGWC - MTEF Budget with PROVINCIAL fund allocation according to Roads Infrastructure Branch Upgrade to paved standards

Road	Dir	From km	To km	From	To	District	AADT	Gravel mm	Commit	NPV Benefit	Upgrade to pave standards: Cost (R'000)				
											2014	2015	2016	2017	2018
DR01374	P	0.47	1.32	Keerom St Robertson	Willemnels Riv CW Lange Valley	DM : Cape Winelands	569	15		#####	5 865				
DR01440	P	0.26	2.09	Jct Mun MR306 Wolseley	Jct OP5774 & OP5775 Elandsklf	DM : Cape Winelands	1024	15		#####	12 627				
DR01090	P	6.73	6.78	Jct MR27 Klapmuts	Jct DR1098 Hoopenberg	DM : Cape Winelands	424	20		7 943 182		345			
DR01053	P	4.20	7.60	Jct MR27 Welgegund	Jct MR27 Audacia	DM : Cape Winelands	1004	90		#####		23 460			
DR01385	P	2.44	3.80	Jct DR1118 & MR210 Drakenstein	Jct OP05631 Lot C Keerweder	DM : Cape Winelands	529	0		8 185 567			9 384		
DR01129	P	2.82	4.76	Jct MR23 Olyvenhout	Jct DR1152 Groenberg	DM : Cape Winelands	513	0		7 728 898			13 386		
DR01351	P	1.13	5.26	Jct MR191 Lamotte	Jct DR1343 Franschoek	DM : Cape Winelands	723	75		7 426 054			28 497		
DR01413	P	6.59	8.39	Jct DR1152 Olifantskop	Jct OP05643 West Bdy Welvanpas	DM : Cape Winelands	508	7		5 380 917				12 420	
DR01094	P	0.00	1.92	Jct MR174 Cross Roads	Jct DR1097 Kraaifontein	DM : Cape Winelands	484	33		#####				13 248	
DR01449	P	0.78	11.12	Jct TR22/2 eNduli	Jct OP5854 & OP5855 Swaarmoed	DM : Cape Winelands	537	12		#####				71 346	
DR01104	P	0.00	1.72	Jct MR189 Klapmuts	Jct OP5241 Klapmuts Outspan	DM : Cape Winelands	432	50		7 133 779					11 868
DR01124	P	0.17	1.95	Jct MR201 Vlakplaas	Jct DR1119 Eikerus	DM : Cape Winelands	457	35		5 208 442					12 282
DR01123	P	12.28	22.00	Jct TR25/1 Botter River Valle	Jct MR174 Klipheuwel	DM : Cape Winelands	517	24		#####					67 068
TOTALS											18 492	25 820	53 283	99 031	93 236

Table Annexue F -3 WCG MTEF Budget for Regravel: Cape Winelands District Municipality

**PGWC - MTEF Budget with PROVINCIAL fund allocation according to Roads Infrastructure Branch
Regravel
programme**

Road	Dir	From km	To km	From	To	AAD T	GravelThickness mm	Surface Type	Commit	NPV Benefit	Regravel Cost (R'000)									
											2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
DR01121	P	0.00	5.00	Jct DR1126 Bordje Outspan	Jct OP05244 Middelburg	154	12	Gravel		3 894 251		1 650						1 650		
DR01122	P	0.47	4.84	Jct MR27 Hoogstede	Jct DR1126 Langerug	184	17	Gravel		9 312 488		1 442				1 442				
DR01128	P	0.00	2.00	Jct. DR1125 Paarl	Klip Valley	122	0	Gravel		2 539 523			660						660	
DR01128	P	2.00	3.00	Jct. DR1125 Paarl	Klip Valley	72	16	Gravel		1 171 639								330		
DR01130	P	0.03	3.23	Jct DR1125 Schoone Oord	Jct DR1123 Vondeling	117	14	Gravel		3 357 401			1 056							
DR01133	P	0.11	1.70	Jct MR23 Soetendal	Jct DR1152 Olifantskop	178	0	Gravel		3 811 809			525				525			
DR01135	P	0.00	3.20	Jct MR23 Malan Stn	Jct DR1152 Driefontein	256	0	Gravel		6 187 945	1 056					1 056				
DR01151	P	0.00	0.12	Jct TR23/2 Hermon	Hermon Railway Station	264	0	Gravel		12 649 077	40					40				
DR01151	P	0.35	0.54	Jct TR23/2 Hermon	Hermon Railway Station	264	0	Gravel		12 649 077	63					63				
DR01152	P	0.02	5.00	Jct TR23/2 Hermon	Wellington Municipal Boundary	147	0	Gravel		3 956 943		1 643						1 643		
DR01152	P	5.00	8.58	Jct TR23/2 Hermon	Wellington Municipal Boundary	80	0	Gravel		1 463 176								1 181		
DR02244	P	25.68	35.37	Jct MR316 Beukes Fontein	Jct DR1487 Houd Den Bek	72	0	Gravel		1 458 432					3 198					
DR02245	P	0.00	4.00	Jct MR310 Dissel Fontein	Jct OP08001 Tweefontein	140	19	Gravel		3 571 241			1 320						1 320	
DR02245	P	4.00	5.54	Jct MR310 Dissel Fontein	Jct OP08001 Tweefontein	82	29	Gravel		1 878 248						508				
DR01154	P	0.79	3.85	Jct TR23/2 Sonquasdrift	Jct MR226 Riebeek Kasteel	284	0	Gravel		7 000 997	1 010					1 010				
DR01154	P	3.91	4.32	Jct TR23/2 Sonquasdrift	Jct MR226 Riebeek Kasteel	284	0	Gravel		7 000 997	135					135				
DR01161	P	33.26	38.40	Jct NR 7/3 Moorreesburg	Jct TR23/3 Skoenmakersfontein	179	0	Gravel		5 857 740			1 696				1 696			
MR00294	P	1.59	25.00	Jct TR31/3 Montagu	Jct MR315 Witvlakte	89	0	Gravel		1 342 813							7 725			
MR00299	P	5.13	8.45	Jct MR302 De Breede River	Jct DR1398 Goudini Spa	243	64	Gravel		5 789 028			1 096					1 096		
MR00310	P	84.45	94.57	Jct Mun MR22 Ceres	Jct NR 7/4 Citrusdal	102	17	Gravel		2 634 941				3 340						
MR00316	P	0.26	2.50	Jct TR22/2 Riet Valley	Northern Cape Boundary	199	0	Gravel		6 149 192		739			739					
MR00316	P	3.95	5.86	Jct TR22/2 Riet Valley	Northern Cape Boundary	150	0	Gravel		4 729 210			630						630	
MR00316	P	5.86	45.00	Jct TR22/2 Riet Valley	Northern Cape Boundary	64	9	Gravel		1 527 474					12 916					

DR01353	P	0.00	5.00	Jct MR290 Rem Uitnood	Jct MR290 Almond Grove	101	0	Gravel		2 315 114				1 650			
DR01080	P	1.76	2.64	Jct MR187 Bottelary	Eikenhof	166	33	Gravel		3 351 085		290					290
DR01355	P	5.11	6.20	Jct DR1342 Le Chasseur	Le Chasseur Boundary	70	0	Gravel		1 268 621						360	
DR01356	P	0.00	5.00	Jct TR31/3 Locarno	Jct MR294 Montagu	83	2	Gravel		1 333 067						1 650	
DR01356	P	5.00	13.06	Jct TR31/3 Locarno	Jct MR294 Montagu	142	0	Gravel		2 848 354			2 660				2 660
DR01080	P	2.64	3.33	Jct MR187 Bottelary	Eikenhof	90	56	Gravel		1 769 930				228			
DR01360	P	0.00	14.75	Jct DR1355 La Chasseur	Jct DR1375 Roode Kleygat	82	0	Gravel		2 046 937							4 868
DR01364	P	4.33	6.03	Jct TR31/1 Goree's Hoogte	Jct OP5919 & OP5917 Riverside	231	0	Gravel		5 695 255	561				561		
DR01364	P	6.24	10.44	Jct TR31/1 Goree's Hoogte	Jct OP5919 & OP5917 Riverside	139	0	Gravel		3 452 184			1 386				1 386
DR01366	P	0.00	3.35	Jct TR31/2 Riet Valley	Jct OP6034 Klein Klaasvoogdsri	305	0	Gravel		6 915 109	1 106			1 106			
DR01366	P	3.35	4.66	Jct TR31/2 Riet Valley	Jct OP6034 Klein Klaasvoogdsri	115	0	Gravel		4 594 944		432					432
DR01369	P	0.00	0.98	Jct TR31/2 Riet Valley	Jct OP05945 Klaasvoogdsriver	308	0	Gravel		5 490 272	323			323			
DR01369	P	1.03	3.07	Jct TR31/2 Riet Valley	Jct OP05945 Klaasvoogdsriver	308	0	Gravel		5 490 272	673			673			
DR01369	P	3.07	4.26	Jct TR31/2 Riet Valley	Jct OP05945 Klaasvoogdsriver	90	0	Gravel		1 303 698			393				
DR01083	P	0.59	1.40	Jct MR174 Koelenhof Prison	Jct DR1085 Koelenhof Farm	300	61	Gravel		6 305 934		267					267
DR01372	P	7.33	8.10	Jct Unknown St Robertson	Orange Grove	98	0	Gravel		1 513 641				254			
DR01374	P	1.32	4.00	Keerom St Robertson	Willemnells Riv CW Lange Valley	95	0	Gravel		1 621 661				884			
DR01375	P	0.00	4.96	Jct DR1347 Moordkuil	Jct OP05676 Roode Kleygat	246	15	Gravel		5 962 099	1 637				1 637		
DR01376	P	0.00	1.94	Jct MR294 Helpmekaar	Jct DR1382 Knipe's Hope	64	6	Gravel		1 846 238					640		
DR01377	P	1.68	4.02	Jct TR31/1 De Noree	Jct DR1400 Klopperbosch	63	2	Gravel		1 268 560						772	
DR01377	P	4.02	20.18	Jct TR31/1 De Noree	Jct DR1400 Klopperbosch	133	0	Gravel		3 321 162			5 333				5 333
DR01378	P	0.00	2.39	Jct DR1374 Lange Valley	Jct OP05940 Farm Keur Kloof	102	0	Gravel		2 915 828				789			
DR01379	P	7.41	8.26	Jct TR30/2 Reiersrus	Jct DR1375 Scherpenheuvel	374	0	Gravel		6 997 702	281			281			
DR01380	P	0.00	7.11	Jct TR31/1 De Norree	Jct DR1379 Moordkuil	177	36	Gravel		4 696 545		2 346					2 346
DR01380	P	7.79	21.03	Jct TR31/1 De Norree	Jct DR1379 Moordkuil	177	41	Gravel		4 696 545		4 369					4 369
DR01382	P	2.55	8.71	Jct Mun MR295 Montagu	Jct OP6106 & OP6107 Rietvlei 2	134	0	Gravel		3 640 047			2 033				2 033
DR01383	P	2.07	3.32	Jct DR1377 De Norree	Jct OP5929 SW Bdy Farm Norree	128	0	Gravel		2 224 517			413				413
DR01384	P	2.83	3.80	Jct TR31/1 Langvlei Stn	Jct DR1383 Kruispad	101	0	Gravel		7 309 546				320			
DR01384	P	3.80	4.58	Jct TR31/1 Langvlei Stn	Jct DR1383 Kruispad	55	6	Gravel		3 119 839							257

DR01387	P	0.00	4.08	Jct MR295 Het Kruis	Old Baden Private Hotel	147	0	Gravel		2 216 565				1 346					1 346
DR01387	P	4.08	5.10	Jct MR295 Het Kruis	Old Baden Private Hotel	87	0	Gravel		1 125 986							337		
DR01392	P	0.00	4.60	Jct MR295 Keisiedorings	Jct OP06041 Pietersfontein	146	0	Gravel		2 967 764				1 518					1 518
DR01392	P	4.80	9.57	Jct MR295 Keisiedorings	Jct OP06041 Pietersfontein	66	1	Gravel		1 157 248								1 574	
DR01396	P	0.00	0.90	Jct DR1119 Uitkyk	Jct OP05639 Eastern Bdy Uitkyk	169	0	Gravel		4 013 827		297						297	
DR01397	P	0.00	4.75	Jct DR1398 Rawsonville	Jct OP5681 Westrn Bdy Gevonden	128	72	Gravel		3 456 550				1 568					
DR01399	P	0.23	0.97	Jct MR298 Klipdrift	Jct V.Riebeeck St Rawsonville	257	0	Gravel		4 466 201		244					244		
DR01400	P	8.23	10.21	Jct TR31/1 Nuy Station	Jct NR1/3 De Wet Station	216	0	Gravel		3 811 539		653						653	
DR01402	P	6.98	8.00	Jct MR295 Moerasvlei River	Jct MR295 De Koo	98	0	Gravel		1 508 558				337					
DR01402	P	8.00	9.31	Jct MR295 Moerasvlei River	Jct MR295 De Koo	169	0	Gravel		3 182 735		432						432	
DR01403	P	0.09	1.50	Jct DR1408 Welbedacht	Adjoining Olive Annex	234	0	Gravel		3 452 120		465						465	
DR01404	P	0.00	2.24	Jct TR31/1 Alma	Jct DR1394 Solitaire	151	0	Gravel		3 733 495				739					739
DR01094	P	1.92	2.57	Jct MR174 Cross Roads	Jct DR1097 Kraaifontein	167	23	Gravel		4 989 333				215					215
DR01407	P	1.49	2.44	Jct Mun MR201 Wellington	Access Leeuwe Valley	379	0	Gravel		5 005 632		314						314	
DR01095	P	0.00	1.95	Schuurmansfontein	Western Bdy of Watervliet	323	76	Gravel		8 646 163				644					644
DR01413	P	1.68	3.79	Jct DR1152 Olifantskop	Jct OP05643 West Bdy Welvanpas	98	14	Gravel		2 033 484				696					
DR01417	P	0.85	4.29	Jct DR1412 Hexberg	Jct DR1129 Cordies Rus	235	0	Gravel		5 065 946		1 135						1 135	
DR01421	P	0.00	1.45	Jct MR302 De Breede Rivier	Jct OP05752 Olifantsberg	107	71	Gravel		1 763 914				479					
DR01424	P	0.00	1.30	Jct MR302 Jan du Toits River	Jct OP05753 Olifantsberg	112	70	Gravel		2 318 714				429					
DR01427	P	0.00	1.32	Jct MR302 Waaihoek	Waaihoek on Eendracht Farm	145	69	Gravel		3 086 122				436					
DR01427	P	1.32	3.12	Jct MR302 Waaihoek	Waaihoek on Eendracht Farm	68	78	Gravel		1 315 634									594
DR01429	P	0.25	1.75	Jct DR1152 Burgersfontein	Jct OP05645 Kruishof	375	13	Gravel		8 212 033		495					495		
DR01429	P	1.75	3.88	Jct DR1152 Burgersfontein	Jct OP05645 Kruishof	140	39	Gravel		3 401 852				703					703
DR01431	P	0.00	1.31	Jct MR302 Botha Station	Jct OP05759 Boesmansvlei	187	57	Gravel		3 821 006				432					432
DR01436	P	1.44	3.00	Jct MR201 Romansrivier Cellars	Jct OP05772 De Liefde	191	0	Gravel		3 534 183		515						515	
DR01436	P	3.00	4.22	Jct MR201 Romansrivier Cellars	Jct OP05772 De Liefde	96	0	Gravel		1 283 977								403	
DR01440	P	2.09	6.98	Jct Mun MR306 Walseley	Jct OP5774 & OP5775 Elandsklf	167	0	Gravel		4 367 654		1 614						1 614	
DR01099	P	0.00	2.28	Jct. MR205 Babylons Toren	Jct. MR191 near Cillie	325	19	Gravel		6 592 361		752						752	

DR01440	P	7.10	9.48	Jct Mun MR306 Wolseley	Jct OP5774 & OP5775 Elandsklf	80	0	Gravel		1 462 127								785
DR01441	P	1.93	2.00	Jct NR1/3 De Doorns	Jct OP05737 Keurbosch Kloof	229	0	Gravel		7 832 830	23					23		
DR01441	P	2.00	3.20	Jct NR1/3 De Doorns	Jct OP05737 Keurbosch Kloof	108	0	Gravel		3 716 479			396					
DR01444	P	0.09	13.76	Jct MR323 Tulbagh Rd Stn	Jct DR1440 Kluitjieskraal	228	0	Gravel		4 934 708	4 511				4 511			
DR01446	P	0.00	1.00	Jct TR22/1 Goedgevonden	Jct OP5800&OP5798 Boontjiesriv	155	0	Gravel		2 561 704		330						330
DR01446	P	1.00	2.37	Jct TR22/1 Goedgevonden	Jct OP5800&OP5798 Boontjiesriv	86	0	Gravel		1 205 010			452					
DR01447	P	7.85	9.48	Jct TR22/2 Ceres	Jct OP05848 Ezelsfontein	190	0	Gravel		5 096 381	538					538		
DR01451	P	0.00	7.12	Jct DR1452 Schapenrivier	Jct OP5882 & OP5881 Leeuwenftn	99	0	Gravel		1 561 908							2 350	
DR01452	P	22.90	27.72	Jct TR22/2 Schapen River	Jct TR22/2 Hottentotkloof	225	0	Gravel		6 205 616	1 591					1 591		
DR01452	P	27.72	30.00	Jct TR22/2 Schapen River	Jct TR22/2 Hottentotkloof	115	0	Gravel		4 578 827		752						752
DR01452	P	30.00	30.49	Jct TR22/2 Schapen River	Jct TR22/2 Hottentotkloof	46	0	Gravel		-						162		
DR01455	P	0.00	0.78	Jct TR23/3 Gouda	Gouda Railway Station	70	0	Gravel		1 829 369								257
DR01458	P	0.00	6.00	Jct TR22/2 Rhodona	Jct MR310 Prince Alfred Hamlet	276	0	Gravel		4 919 984	1 980				1 980			
DR01459	P	1.18	2.92	Jct MR313 Bellevue	Jct DR1465 De Oude Drosdy	253	0	Gravel		5 121 700	574					574		
DR01459	P	2.92	6.72	Jct MR313 Bellevue	Jct DR1465 De Oude Drosdy	87	0	Gravel		1 922 689								1 254
DR01460	P	3.95	4.88	Jct Mun MR312 Tulbagh	Jct OP05837&OP05838 Witzenberg	78	0	Gravel		1 153 115			307					
DR01461	P	6.42	8.98	Jct Mun MR312 Tulbagh	Jct DR1471 Vrolikheid	115	0	Gravel		3 663 657			845					845
DR01461	P	11.66	12.83	Jct Mun MR312 Tulbagh	Jct DR1471 Vrolikheid	75	0	Gravel		1 315 835								386
DR01462	P	0.31	1.38	Jct MR312 Kruis Valley	Jct OP5839 Dennelaan	122	0	Gravel		1 847 765		353						353
DR01464	P	0.95	1.92	Jct DR1461 La Rhone	Jct OP05819 & OP05820 Eureka	182	0	Gravel		4 992 606	320					320		
DR01467	P	0.00	3.82	Jct TR22/2 Vogelgesang	Jct DR1470 Olckersia	77	0	Gravel		2 097 943					1 261			
DR01104	P	1.72	2.95	Jct MR189 Klapmuts	Jct OP5241 Klapmuts Outspan	241	35	Gravel		8 967 684	406							406
DR01474	P	0.00	1.37	Jct DR1471 Bloubank	Jct OP05828 Weltevrede	72	0	Earth		2 199 576								452
DR01478	P	0.00	1.00	Jct DR1476 Opstal	Jct OP05826 Winterhoek	174	0	Gravel		3 903 797	330					330		
DR01478	P	1.00	2.00	Jct DR1476 Opstal	Jct OP05826 Winterhoek	99	0	Gravel		1 805 374			330					
DR01480	P	0.85	2.30	Jct MR229 Saron	Jct DR1168 Lushof	234	0	Gravel		4 756 835	479					479		
DR01109	P	0.00	6.30	Jct MR213 Eenzaamheid	Jct DR1098 Groenefontein	131	0	Gravel		3 304 301			2 079					2 079

DR01487	P	66.02	72.0 2	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	78	0	Gravel		1 906 151						1 980				
DR01487	P	72.39	76.6 9	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	78	12	Gravel		2 134 671						1 419				
DR01487	P	77.63	80.2 1	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	78	0	Gravel		1 988 083					851					
DR01487	P	80.64	90.0 0	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	77	0	Gravel		2 018 668					3 089					
DR01487	P	90.00	100. 00	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	82	16	Gravel		2 009 678						3 300				
DR01487	P	100.00	102. 53	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	115	0	Gravel		3 398 052		835								
DR01487	P	102.83	105. 93	Jct MR539 Kriedouwkrantz	Jct MR310 Op-Die- Berg	115	7	Gravel		3 471 693		1 023								
DR01115	P	0.26	4.50	Jct MR27 Ruite Valley	Jct MR213 Kuilenburg	152	13	Gravel		4 761 680			1 399						1 399	
Total											18622	1744 7	17497	34643	2654 9	46424	2818 9	2978 3	1549 4	3606 2

Table Annexue F-4 WCG MTEF Budget: Cape Winelands District Municipality

PGWC - MTEF Budget with PROVINCIAL fund allocation according to Roads Infrastructure Branch

Totals for analysis based on 2013 visual assessments, compiled April 2014 - May 2014

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Reseal	35471	87600	87434	54137	75006	66294	95630	13922	56798	71719
Rehabilitation	52258	217580	194874	144704	199380	160940	19006	18206	999	4344
Upgrade to Pave	18492	25820	53283	99031	93236	0	0	0	0	0
Regravel	18622	17447	17497	34643	26549	46424	28189	29783	15494	36062
Total (R'000)	124843	348448	353088	332515	394171	273659	142824	61911	73290	112125

