

11.5.5	REQUEST FOR APPROVAL OF THE COMPREHENSIVE INTEGRATED TRANSPORT PLAN
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Collaborator No: 702614
IDP KPA Ref No: Good Governance and Compliance
Meeting Date: 14 April 2021 and 28 April 2021

1. SUBJECT: REQUEST FOR APPROVAL OF THE COMPREHENSIVE INTEGRATED TRANSPORT PLAN

2. PURPOSE

That Council approves the 2019-2020 Update of the Comprehensive Integrated Transport Plan (CITP).

3. DELEGATED AUTHORITY

Municipal Council.

4. EXECUTIVE SUMMARY

The 2016 Comprehensive Integrated Transport Plan (CITP) is valid for a five year period, with annual updates each year and the full review every 5 years.

The draft 2019-2020 update of the CITP have highlighted important strategies and focuses on a common vision for transport.

The Municipality's transport vision and objectives were updated to ensure:

- Connecting of the outlying communities with the CBD in a safe and dignified manner ensuring access to opportunities.
- Strive towards car-free living and modal shift in Stellenbosch CBD, towards public transport, walkability and cycle-ability.
- Support and advance social and inclusive economic development.
- Alignment with the key imperatives of poverty alleviation and reduced inequality.
- A road network to support the Municipality's transport vision.

The draft 2019-2020 update of the CITP also takes into account the recently approved Spatial Development Framework (SDF), and proposes a more effective approach to improve transport (including freight), public transport and NMT (non-motorized transport).

5. RECOMMENDATIONS

- (a) that the content of this Comprehensive Integrated Transport Plan annual update be noted;
- (b) that Council notes that, for this update, targeted consultation was carried out, and for the (5 yearly) review of the 2016 CITP (to be undertaken during 2021), a full public participation process will be carried out; and
- (c) that the Draft 2019-2020 Comprehensive Integrated Transport Plan Update, attached as **ANNEXURE A**, be accepted.

6. DISCUSSION / CONTENTS**6.1 Background**

The Stellenbosch Municipality (SM) last Comprehensive Integrated Transport Plan (CITP) was approved by the Provincial Minister of Transport and Public Works in terms of section 36(4) of the National Land Transport Act (NLTA), Act 5 of 2009 in October 2018. The annual update of Stellenbosch's CITP, was carried out in accordance with the regulations published by the Minister dated 29 July 2016, Minimum Requirements (MR) for the Preparation of Integrated Transport Plans, 2016 no 881.

6.2 Discussion

The 2019-2020 update of the CITP makes provision for the recently approved Spatial Development Framework (SDF), including proposed housing developments. Detailed assessments of the current transport system was carried out, international case studies of similar university towns were undertaken and improvements to the transport system are recommended.

The following chapters were updated:

- Chapter 1: Introduction provides a brief overview of the project, the study area and the project methodology
- Chapter 2: Transport Vision and Objectives describes the position and policy statements guiding transport for Stellenbosch Municipality.
- Chapter 3: Transport Register summarises the various types of transport in Stellenbosch Municipality.
- Chapter 4: Spatial Development Framework provides an overview of the spatial structure and land use framework which will influence the transport for Stellenbosch Municipality.
- Chapter 5: Transport Needs Assessment discusses the transport needs identified for the area.
- Chapter 6: Public Transport Plan describes the components identified to improve public transport for the municipality.
- Chapter 7: Transport Infrastructure Strategy summarises the strategy to improve transport infrastructure for various modes of transport.
- Chapter 8: Travel Demand Strategy provides an overview of the interventions to manage the travel demand better towards more sustainable transport.
- Chapter 9: Non-Motorised Transport summarises the strategies and plans toward more sustainable modes of walking and cycling.
- Chapter 10: Freight Transport Strategy summarises the goods and hazardous substances networks as other strategies to support effective freight movement.
- Chapter 11: Other Transport Related Strategies summarises the improvements proposed for other transport including public transport safety and security, road user safety, law enforcement, tourism and accessible transport.
- Chapter 12: Funding Strategy and Summary of Programmes provides a description of the extent of funding, funding sources as well as the list of programmes per transport sector strategy.
- Chapter 13: Stakeholder Consultation describes the extent of participation and consultation that was undertaken to prepare the CITP update.

In addition, the following aspects were earmarked as focus areas:

- Public Transport including MBT, bus and rail as well as local and inter-municipal commuter services.
- Public transport such as long distance or cross-border, transport for learners, meter-taxis or other e-hailing services.
- NMT (walking and cycling) as a more sustainable mode of transport.
- Improvements to infrastructure networks and services which supports the movement of its people and goods, as part of a vibrant economy.

6.3 Financial Implications

Cost estimates are carried out once a proposal is identified for further assessment or implementation. The cost estimates / funding analysis will determine the financial implications and the most appropriate funding source / model will be selected. The implementation of proposals may be phased to coincide with available funding. Examples of sources of funding are: Municipal Capital Funding, Development Contributions, Provincial Roads Authority and Infrastructure Grants.

6.4 Legal Implications

The recommendations in this report comply with Council's policies and all applicable legislation. The minimum requirements for Integrated Transport Plans were published on 30 November 2007 in the Government Notice No 1119. The MEC Transport and Public Works, has recommended that the Stellenbosch Municipality be classified as a Type 1 Planning Authority based on classification criteria contained in the Government Notice. The Municipality is therefore required to compile a CIP every 5 years and update the CIP annually. The CIP and its annual updates must be submitted to the MEC for approval.

6.5 Staff Implications

This report has no staff implications to the Municipality.

6.6 Previous / Relevant Council Resolutions

Previous CIP's and annual updates had been approved by Council, as well as the Transport MEC.

6.7 Risk Implications

This report has no risk implications for the Municipality.

RECOMMENDATIONS FROM INFRASTRUCTURE SERVICES COMMITTEE MEETING TO THE EXECUTIVE MAYOR: 2021-03-04: ITEM 5.1.3

- (a) that the content of this Comprehensive Integrated Transport Plan annual update be noted;
- (b) that Council notes that, for this update, targeted consultation was carried out, and for the (5 yearly) review of the 2016 CIP (to be undertaken during 2021), a full public participation process will be carried out; and
- (c) that the Draft 2019-2020 Comprehensive Integrated Transport Plan Update, attached as **ANNEXURE A**, be accepted.

RECOMMENDATIONS FROM THE EXECUTIVE MAYOR, IN CONSULTATION WITH THE EXECUTIVE MAYORAL COMMITTEE, TO COUNCIL: 2021-04-14: ITEM 7.5.5

- (a) that the content of this Comprehensive Integrated Transport Plan (CITP) annual update be noted;
- (b) that Council notes that, for this update, targeted consultation was carried out, and for the (5 yearly) review of the 2016 CITP (to be undertaken during 2021), a full public participation process will be carried out; and
- (c) that the Draft 2019-2020 Comprehensive Integrated Transport Plan Update, attached as **ANNEXURE A**, be accepted.

ANNEXURES**Annexure A: Draft CITP UPDATE 2020****FOR FURTHER DETAILS CONTACT:**

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REPORT DATE	15 February 2021

ANNEXURE A

Bath

- Public transport
- City centre well served by local bus system (At least 1/hour; less frequent weekends and public holiday operations)
- Hop on-off tourist sight-seeing
- Airport service every 2 hours
- Regional national express coaches London, Oxford, Southampton, Cardiff and Swansea
- Website available for booking services
- Rail services to other towns



Heidelberg

- Good public transport system (rail, bus and trams)
- Strong walking and cycling; network of cycle paths; pedestrian zones
- Regional bus to surrounding towns
- InterCity Express – ICE regional train system
- Local bus with well marked widespread stops across the city.
- Streetcars, travel to the nearby towns and suburbs. Buses and trams share stops for easy transfer
- Also local trains for shorter destinations to nearby towns



Bruges

- Bruges is a large village and most things are within walking distance
- Only one form of public transport i.e. bus
- Regional rail access but no local subways or trams.
- There is a multi-ticket for the city buses you can buy a multi-journey ticket / ten rides pass for 9 euros (price in August 2013), instead of paying 1,30 euro per trip.
- Weekdays – 10 min schedule.



Tübingen

- Local bus service with more than 20 **bus** lines
- Also a few **local** train stations connecting the different parts of the city.
- Buses generally run from about 6 a.m. to midnight on weekdays, with night buses covering the main routes in the city after midnight on Thursday, Friday and Saturday nights
- Regional rail and bus services available from surrounding cities
- Part of Naldo, regional association for integrated ticket and fares. Student cards and free Saturdays.
- Free for people with disabilities. Part of fleet marked for wheelchair access

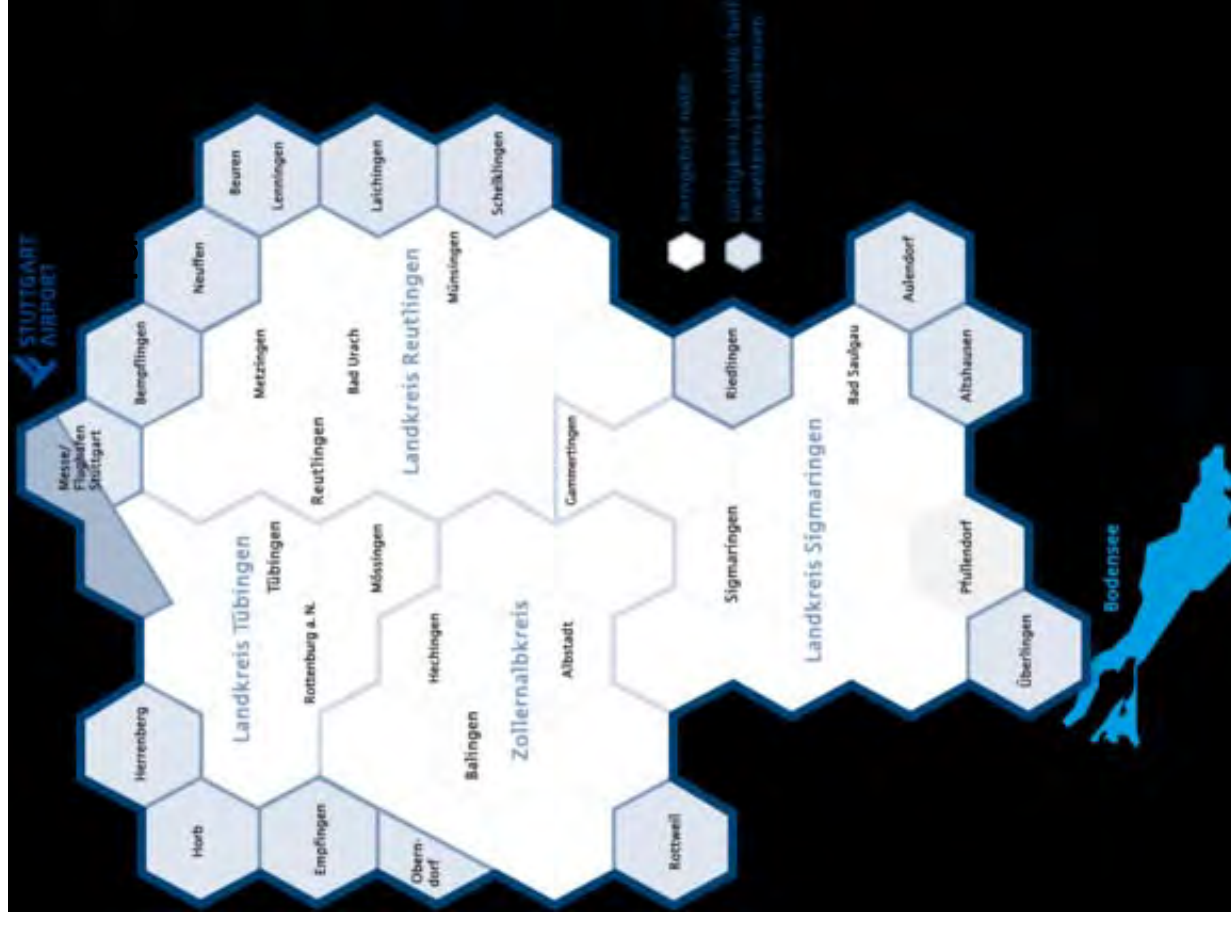


Tuebingen has more than 20 **bus** lines as well as a few **local** train stations connecting the different parts of the city. Buses generally run from about 6 a.m. to midnight on weekdays, with night buses covering the main routes in the city after midnight on Thursday, Friday and Saturday nights

The Neckar-Alb-Donau transport association, or **naldo** for short, is an amalgamation of the [**administrative districts**](#) of Reutlingen, Sigmaringen, Tübingen and the Zollernalb district, as well as the region's transport companies for local public transport. The **naldo** tariff has existed since 2002 and is therefore a uniform ticket, which is recognized and sold by all 53 [**transport companies**](#) in the region.

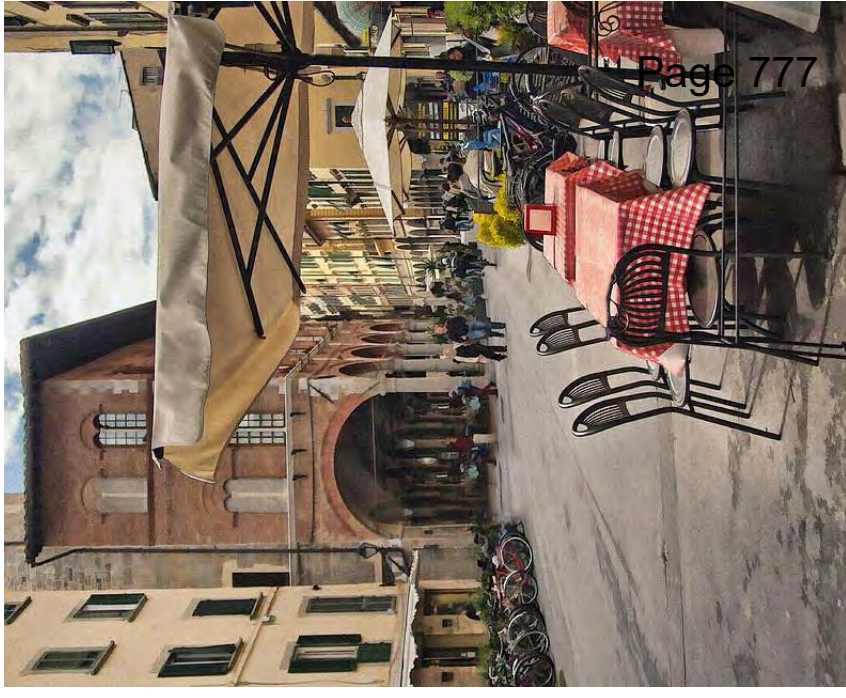
The advantage for you is obvious: by bus and train you can now reach any destination within the **naldo** with a single ticket! Regardless of which transport company you use and how many modes of transport you use, because the **naldo** tariff applies to all buses and trains (except IC) including city transport.

The network area covers 3,700 km² and reaches approx. 828,000 inhabitants. 13 railway lines and 350 bus lines with approx. 3,200 stops are integrated in the network. In recent years, cross-network cooperations with six neighboring associations in nine counties have also been



Pisa

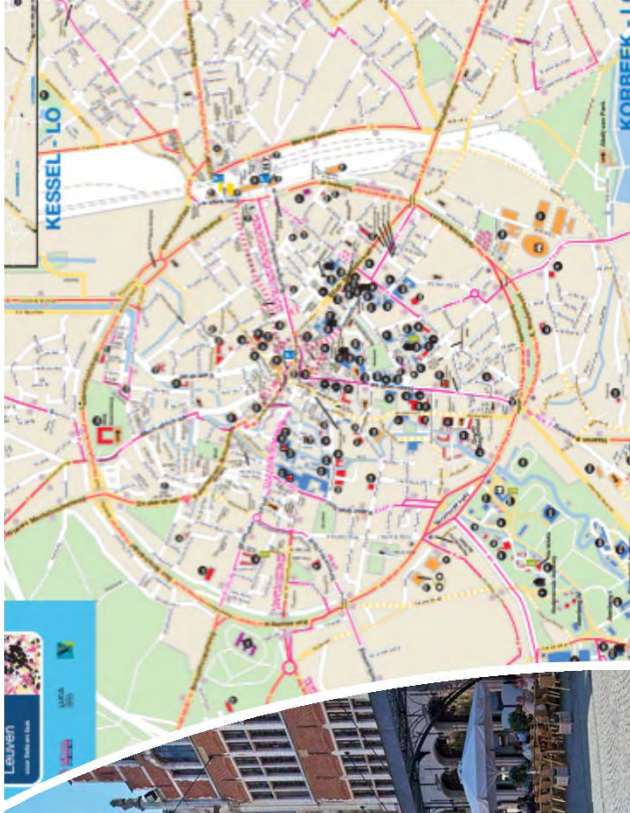
- Regional rail access to other destinations across Italy. Pisa's main train station, Pisa Centrale, is 1.5km outside of town, which can be reached on foot or by bus.
- Does not have rail service – bus, walk or cycle
- Bus used to the outskirts of the city, as well as further afield
- Within centre of town, you'll be travelling for less than 5km and so your ticket will only cost about 1€ (valid for one hour).
- Many of the buses connect the city centre with the train station and/or the airport.
- Running past all the major sites of Pisa is a golden tourist train, which takes you on a 30-minute guided tour through the city



Lund

- Lund Central station is the third biggest station in Sweden and public transport is an integral part of the city.
- Regional, national and international trains available
- Also regional busses, connect Lund with surrounding Cities
- Local bus service
- One of the best cities in Sweden to cycle. The main cycle paths in Lund are marked in different colours, both on the map as well as on street signs in the city itself. These signs can be found all along the cycle paths in Lund.

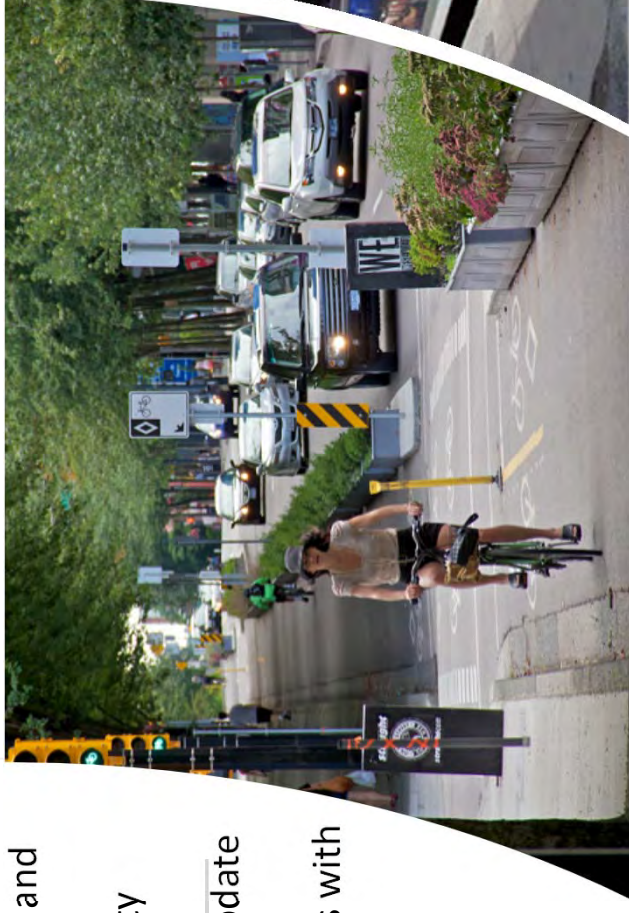




- Regional rail access - Leuven is an important hub in the Belgian railway network. From Leuven station, there are connections to every other major Belgian train stations. International rail connections from Brussels (Leuven - Brussels = approx. 20 minutes).
- Station located at the edge of the city centre with most university buildings within walking distance
- Buses, walking and cycling used for local access
- Free student travel within Leuven
- Ring bus serves ring road - weekdays
- night buses are available after 10 pm

Kingston

- Operates in Kingston and neighbouring community of Amherstview
- University service and to the Kingston Bus Terminal and the railway station.
- Local routes operate Mon–Sat 6:00 to 23:00; Sun 8:30 to 20:30. Run every 30 min weekdays before 19:00; 60 min other
- Express services available
- Dial a Bus services; specific times and must be booked in advance
- Seasonal services during university times of the year
- Rack and Roll – bus can accommodate 2 bicycles
- Daily, Weekly and monthly passes with free transfers (60 min)
- Free for university students



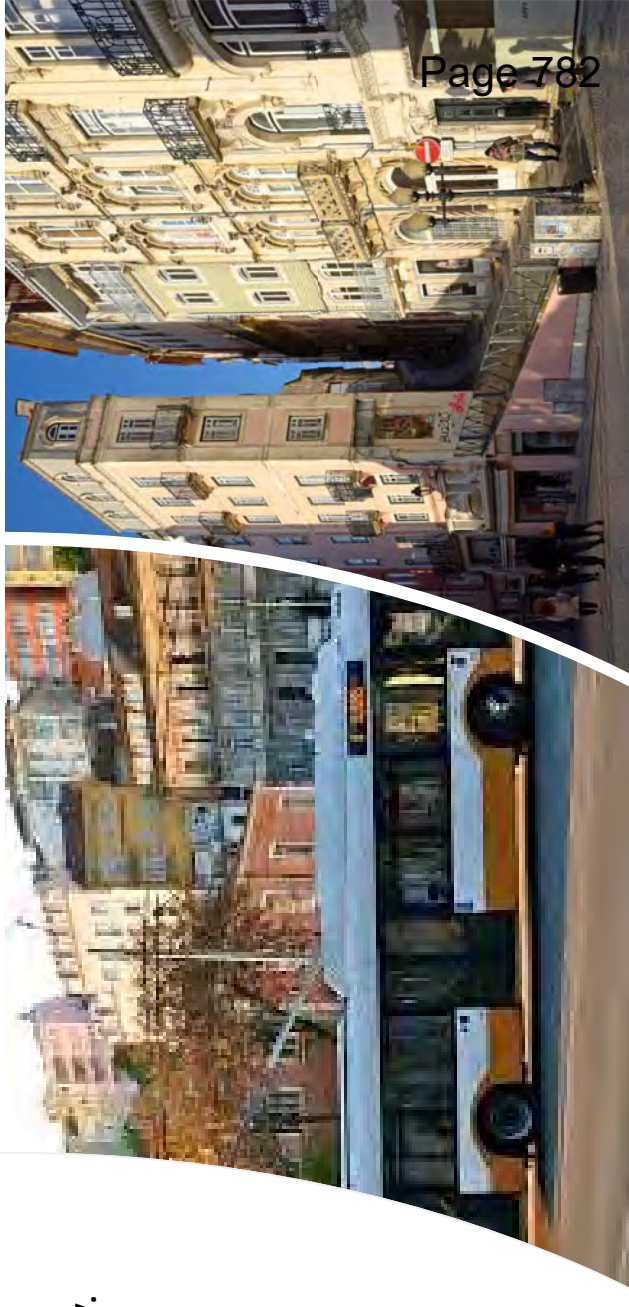
Cambridge

- Several bus services operate seven days a week
- Cambridgeshire Guided Busway has bus services running into the centre of Cambridge with interchanges at the station and Hospital.
- five Park and Ride sites offer parking and charging for electric cars. Buses operate on 7 min headways to centre.
- Highest level of cyclists in the UK. Some adaptations for cyclists e.g. lights for cycle lanes and cycle contraflows on streets; shared paths in parks but no separate cycle paths.
- Two railway stations with direct rail links to London and some other regional towns as well as the airport.
- Plans to designate roads for a ring road with traffic restrictions and limited parking



Coimbra

- Number of public transport options to and within City.
- Network of trolley buses and trains.
- Train lines access regional destinations in surrounding areas as well as around the city.
- Numerous bus lines. Bus services the most comprehensive coverage of all modes.
- Coimbra is the major bus hub in the Beiras region and has a number of regional coach buses to access other towns and cities
- Tourist hop-on hop-off services



Uppsala

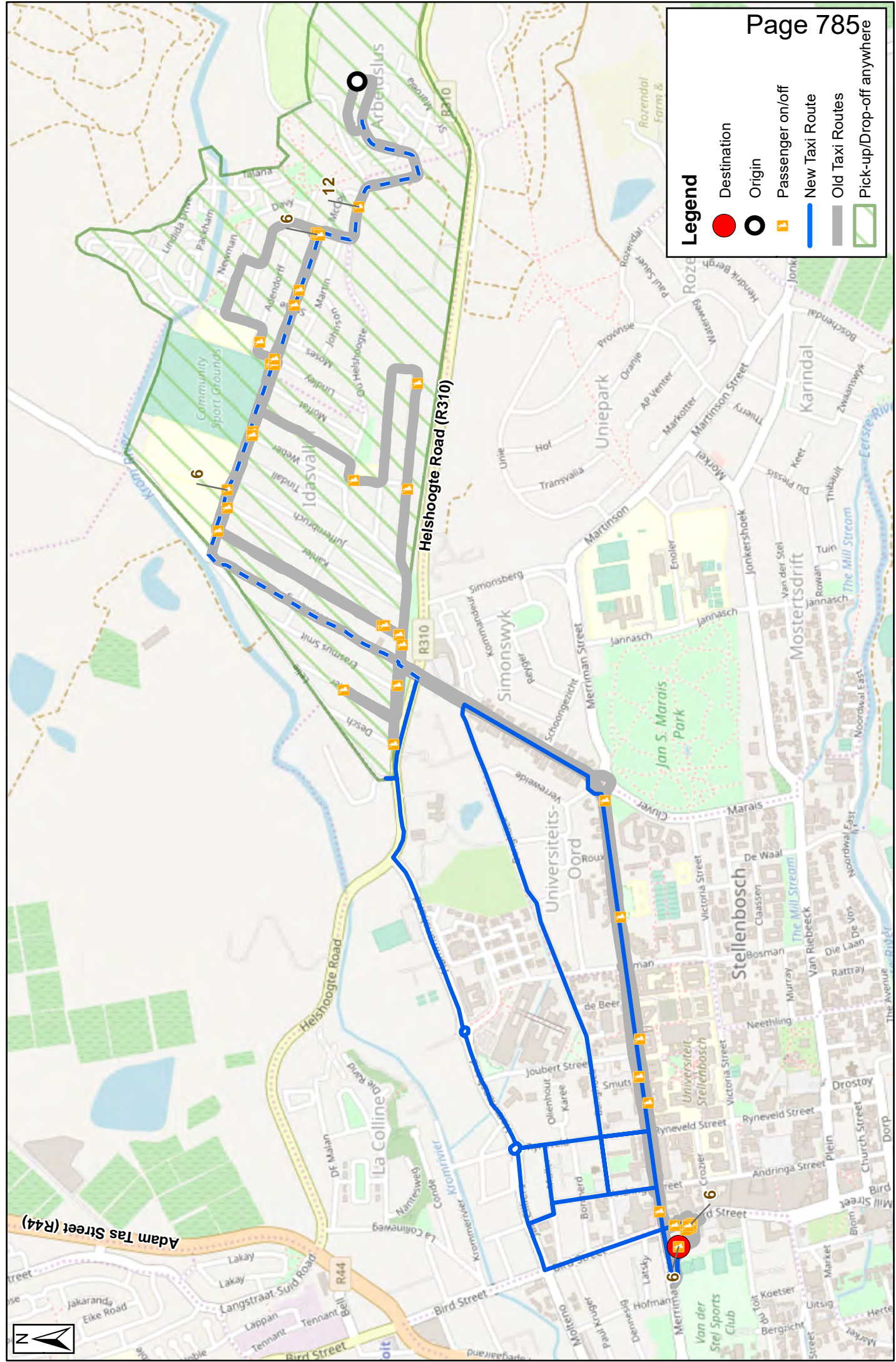
- UL provides public transport in Uppsala and surrounding communities.
- Regional buses and the Upptåget train-system in the county
- Commuter services also available between Uppsala and Älvsjö.
- Bus service (airport coach) and commuter train to Stockholm Arlanda
- Local bus service available in Uppsala
- A single ticket costs around 25 SEK. Tickets can be purchased via UL mobile app, UL Card, UL Ticket machines or on the bus (Costlier than other options).
- 24-hour passes that are valid within zones and for a combination of zones
- Flexible visitor pass providing unlimited travel throughout the county and in Uppsala.



Ghent

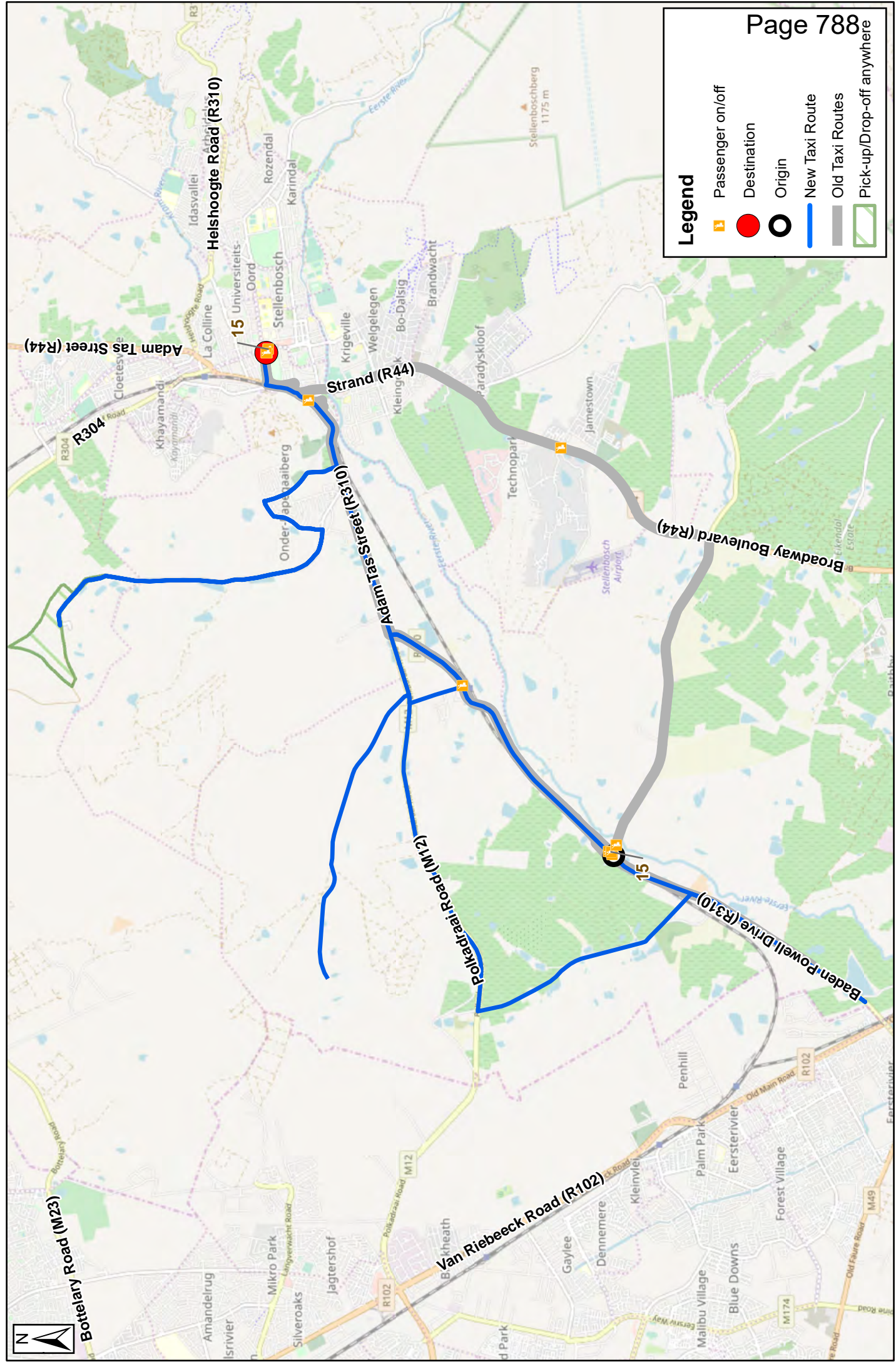
- De Lijn is the public transport provider in Ghent and across the whole of the Flanders region.
- tickets valid for either the bus or the tram but they are also valid anywhere in Flanders.
- There are three main bus stations in Ghent which most transport routes go through: at both the train stations
- Tickets are valid for 60 minutes thus allowing for free transfers
- Night buses run until 1am every night of the week.
- Delijn app available.
- Buses and trams run every day of the year, including public holidays.
- Services run less frequently when the schools are on holiday.
- A single ticket costs €3 for adults. SMS ticket costs €2.25 or m-card10 app allows 10 trips for €15.
- 1, 3 and 5-day tickets (€7, €14, €20) which you can use as many times as you like in that number of days
- Omnipass (monthly) available for residents and often included in salary package.
- If you don't have a ticket, or you don't validate it subject to fines between €20 and €500
- Cycling and walking provision has been made in Ghent particularly in the City Centre zone





Legend

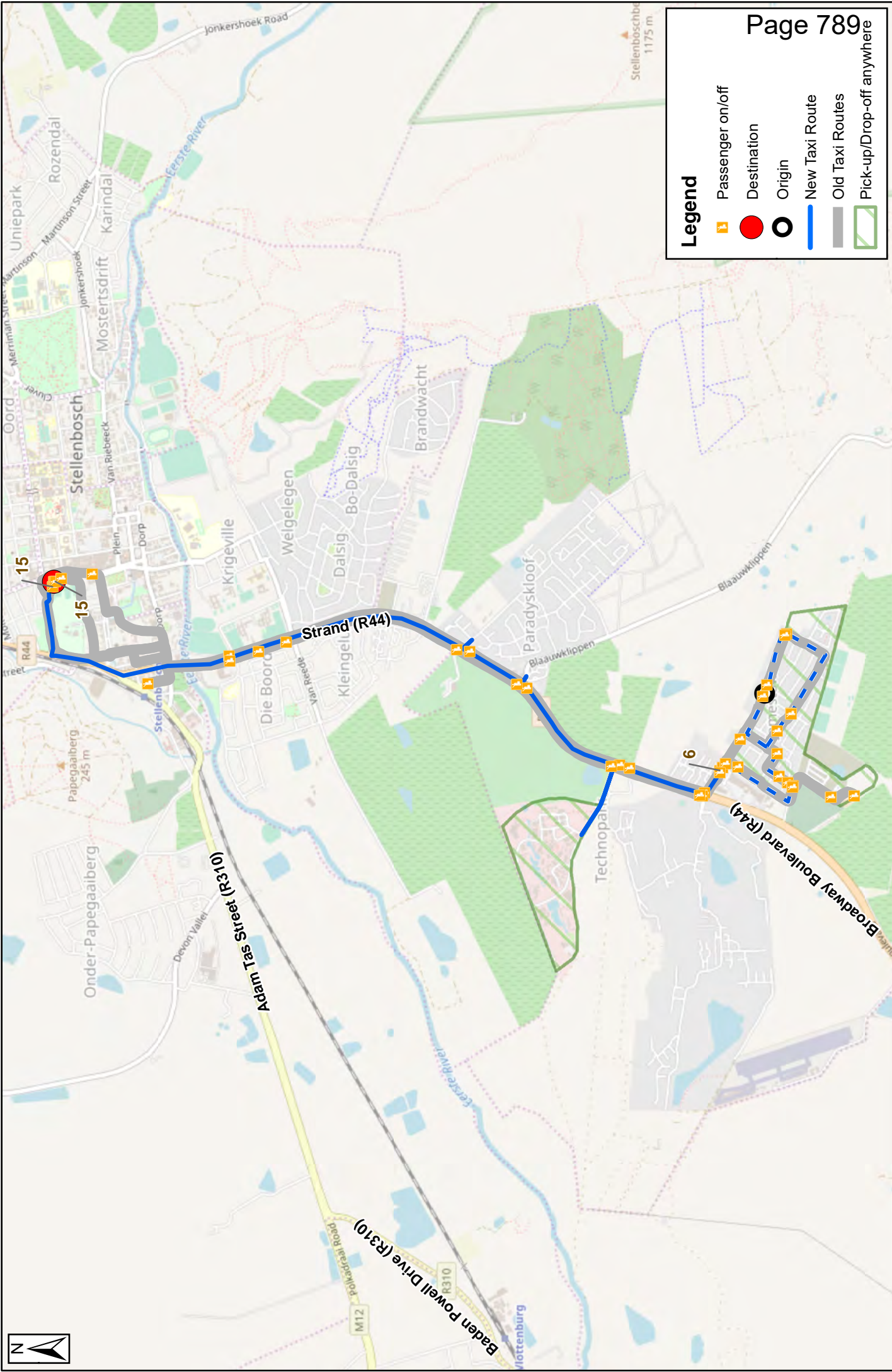
- Destination
- Origin
- Passenger on/off
- New Taxi Route
- Old Taxi Routes
- Pick-up/Drop-off anywhere



Legend

- Passenger on/off
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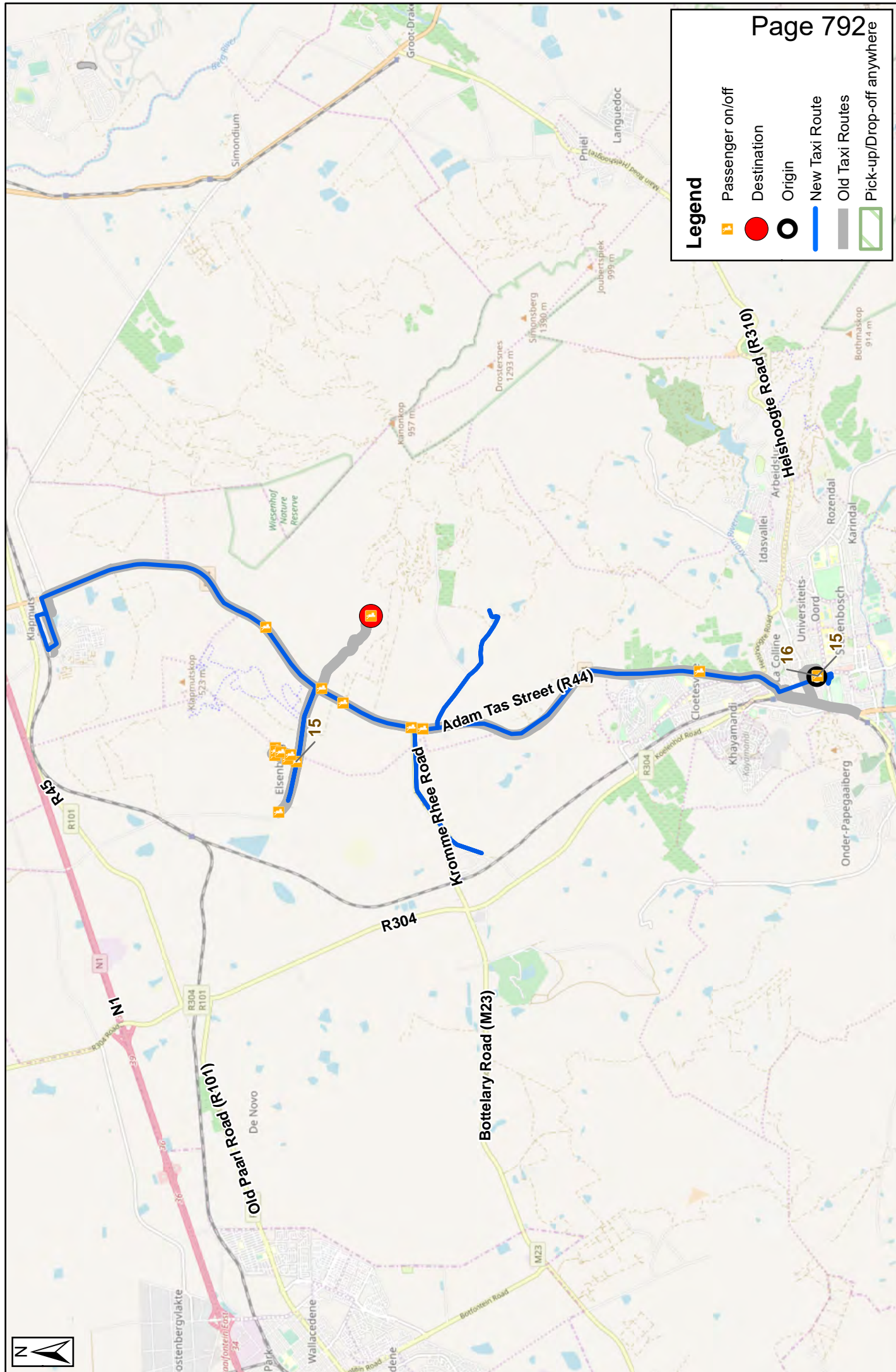


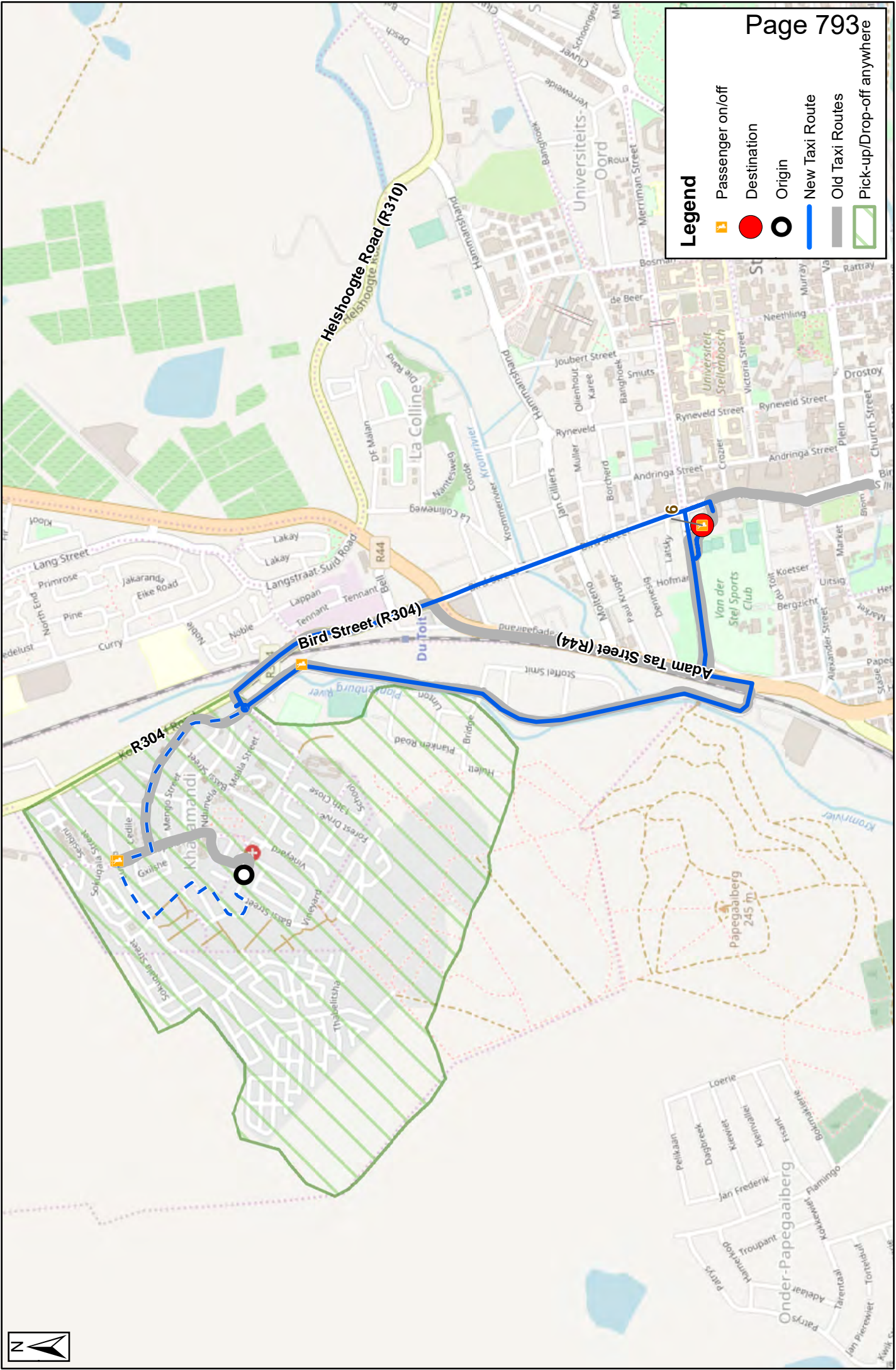


Legend







- Passenger on/off
- Destination
- Origin
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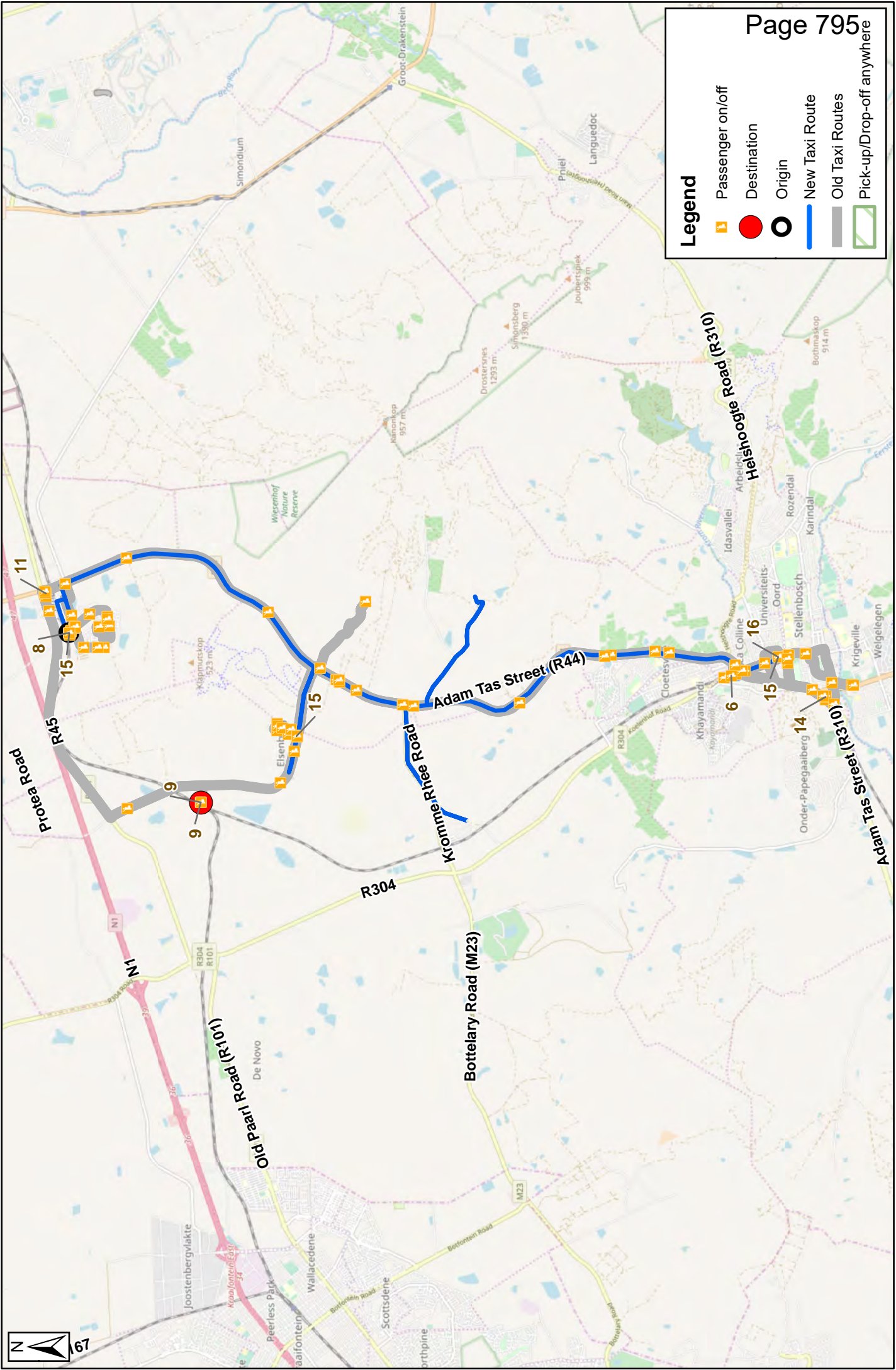






Legend

-  Passenger on/off
-  Destination
-  Origin
-  New Taxi Route
-  Old Taxi Routes
-  Pick-up/Drop-off anywhere



Legend

- Passenger on/off
- Destination
- Origin
- New Taxi Route
- Old Taxi Routes
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	PROJECT: STELLENBOSCH TRAND OLP	MAP: TAXI ROUTE 673, G58 & G60 (Elsenburg/ Muldersvlei/ Klapmuts)	NO: 4k
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STELLENBOSCH
STELLENBOSCH • PNIEL • FRANSCHHOEK
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY



***UPDATE OF THE
COMPREHENSIVE INTEGRATED TRANSPORT PLAN
(CITP) FOR STELLENBOSCH MUNICIPALITY***

June 2020

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SUMMARY SHEET

Report Type	Comprehensive Integrated Transport Plan Draft
Title	UPDATE OF THE COMPREHENSIVE INTEGRATED TRANSPORT PLAN FOR STELLENBOSCH MUNICIPALITY
Location	Stellenbosch Municipality
Client	Stellenbosch Municipality (SM)
Reference Number	ITS 4189
Project Team	Lynne Pretorius, Pr.Eng Zaida Tofie, Pr.Pln
Contact Details	Tel: 021 914 6211
Date	June 2020
Report Status	Draft

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ANNEXURES

- Annexure A: Descriptions of MBT Routes in Stellenbosch (new routes 2019)
- Annexure B: Map of MBT Routes (new routes 2019)
- Annexure C: Table of Development Proposals by Areas in Stellenbosch

ABBREVIATIONS

BRT:	Bus Rapid Transport
CBD:	Central Business District
CITP:	Comprehensive Integrated Transport Plan
CPTR:	Current Public Transport Record
CWD:	Cape Winelands District
CWDM:	Cape Winelands District Municipality
DBSA:	Development Bank of South Africa
DORA:	Division of Revenue Act
DM:	Drakenstein Municipality
FMS:	Freeway Management System
GABS:	Golden Arrow Bus Services
HOV:	High Occupancy Vehicle
IDP:	Integrated Development Plan
EPWP:	Extended Public Works Programme
ITP:	Integrated Transport Plan
ISRDP:	Integrated Sustainable Rural Development Programme
LM:	Local Municipality
MBT:	Minibus Taxi
MIG:	Municipal Infrastructure Grant
MR:	Minimum Requirements
NLTA	National Land Transport Act 5 of 2009
NLT Amendment Bill:	National Land Transport Amendment Bill, 2016
NMT:	Non-Motorised Transport
NDPG:	Neighbourhood Development Partnership Grant'
OL:	Operating licence
OLP:	Operating Licence Plan
OLS:	Operating Licencing Strategy

PLTF:	Provincial Land Transport Framework
PRE:	Provincial Regulatory Entity
Province:	Western Cape Government
SARCC:	South African Rail Corporation
SANRAL:	South African Road Agency (Ltd)
SDF:	Spatial Development Framework
SM:	Stellenbosch Municipality
SMIF:	Special Municipal Innovation Funds
SOV:	Single Occupancy Vehicle
TA:	Taxi Association
TOD:	Transit Orientated Development
TSM:	Transport Systems Management
TR:	Transport Register
URP:	Urban Renewal Programme
VMS:	Variable Message Signs
WCG:	Western Cape Government

EXECUTIVE SUMMARY

1. Introduction

The Stellenbosch Municipality (SM) last Comprehensive Integrated Transport Plan (CITP) was approved by the Provincial Minister of Transport and Public Works in terms of section 36(4) of the National Land Transport Act (NLTA), Act 5 of 2009 in October 2018. SM appointed Innovative Transport Solutions (ITS) to undertake the annual 2020 update of the Stellenbosch's CITP in accordance with the regulations published by the Minister dated 29 July 2016, Minimum Requirements (MR) for the Preparation of Integrated Transport Plans, 2016 no 881.

As part of a legislated development planning process all municipalities have to compile an Integrated Development Plan (IDP). The ITP is a specific sector plan that feeds into the IDP. Ultimately the ITP also forms part of the development of the Provincial Land Transport Framework (PLTF). The preparation of the ITP is set out in the National Land Transport Act 5 of 2009 (NLTA). According to the new MR as prescribed in the Government Gazette no 40174 dated 29 July 2016 the ITP must comprise of a Transport Register which summarises information about transport operations and a Public Transport Plan which plans and guides public transport in the given area of jurisdiction. The OLP will specifically plan and guide for Minibus Taxi operating licences and will be based on the findings of the latest 2019 surveys together with consultation with the Taxi Associations (TA).

The CITP provide guidance to the planning authority on all forms of transport in Stellenbosch including:

- Public Transport including MBT, bus and rail as well as local and inter-municipal commuter services.
- Non-motorised transport or more sustainable modes of walking and cycling
- Other types of public transport such as long distance or cross-border, transport for learners, meter-taxis or other e-hailing services
- Private transport and roads
- Goods and hazardous substances movement

The CITP report is divided into the following chapters:

- Chapter 1: Introduction provides a brief overview of the project, the study area and the project methodology
- Chapter 2: Transport Vision and Objectives describes the position and policy statements guiding transport for Stellenbosch Municipality.
- Chapter 3: Transport Register summarises the various types of transport in Stellenbosch Municipality.
- Chapter 4: Spatial Development Framework provides an overview of the spatial structure and land use framework which will influence the transport for Stellenbosch Municipality.
- Chapter 5: Transport Needs Assessment discusses the transport needs identified for the area.
- Chapter 6: Public Transport Plan describes the components identified to improve public transport for the municipality.
- Chapter 7: Transport Infrastructure Strategy summarises the strategy to improve transport infrastructure for various modes of transport.

- Chapter 8: Travel Demand Strategy provides an overview of the interventions to manage the travel demand better towards more sustainable transport.
- Chapter 9: Non-Motorised Transport summarises the strategies and plans toward more sustainable modes of walking and cycling.
- Chapter 10: Freight Transport Strategy summarises the goods and hazardous substances networks as other strategies to support effective freight movement.
- Chapter 11: Other Transport Related Strategies summarises the improvements proposed for other transport including public transport safety and security, road user safety, law enforcement, tourism and accessible transport.
- Chapter 12: Funding Strategy and Summary of Programmes provides a description of the extent of funding, funding sources as well as the list of programmes per transport sector strategy.
- Chapter 13: Stakeholder Consultation describes the extent of participation and consultation that was undertaken to prepare the CIP.

Annexures contain:

- Annexure A: Summary of International Case Study Review
- Annexure B: Descriptions of New Routes
- Annexure C: Maps of New MBT Routes

2. Transport Vision and Objectives

The transport vision and objectives chapter provides a transport response in order to achieve the Vision and Strategic Focus Areas for SM.

Transport plays a key role in SM future growth and development. It is essential that the picture is clear and agreed upon by all on what the Stellenbosch transport system will need to have in place in order to support future growth opportunities.

Critical Transport Elements for SM to unlock and support its development potential includes:

- A network of infrastructure and services which supports its people and goods movement as part of a vibrant economy.
- Accessibility and mobility at both a local as well as regional level including cost effective and affordable modal options for all of SM's citizens, businesses, and visitors.
- A transport system which is not only feasible now but also sustainable for the future, which supports overarching global, national, provincial and municipal sustainability priorities for future generations.

A review was undertaken of the nature of the key transport elements for other successful international university towns. Research was undertaken on Cities/towns including Bath (U.K.), Bruges (Belgium), Teubingen (Germany), Pisa (Italy), Lund (Sweden), Leuven (Belgium), Kingston (Canada), Cambridge (U.K.), Coimbra (Portugal), Heidelberg (Germany), Uppsala (Sweden) and Ghent (Belgium). These were then compared to the town of Stellenbosch to understand the potential transport gaps that could be addressed for future implementation. All towns reviewed had the following key transport components in common:

- Strong regional road network
- Good regional rail access
- Strong local public transport
- Strong walking and cycling access

In comparison these transport components are constrained or limited for the town of Stellenbosch and would require strengthening or improvements in order to support future sustainable growth.

3. Transport Register

Understanding the demand for travel in SM is critical to the planning of transport, including transport infrastructure and public transport services for the area and thus central to preparing this CITP. Transportation Demand refers to the amount and type of travel people would choose under specific conditions and taking into account factors such as:

- Land Use Patterns and demographics including spatial structure which drives where people live and work, land use mix and housing or population density.
- Economic development such as income levels, levels of employment and the number of tourists.
- Transport Options (private vehicles, public transport, cycling and walking) and proximity to services
- Quality (comfort, reliability, safety, security and cost of services)

Demographics and Socio Economic

In 2018, Stellenbosch municipal area will have an estimated population of 176 523 and after five years this population is estimated to be 190 680. This equates to an estimated growth rate in this time span of 8.0 per cent. The estimated population growth rate of Stellenbosch is therefore 2.3 percentage points higher than the estimated population growth of the Cape Winelands which is 5.7 per cent.

Households and individuals in the Stellenbosch Municipal Area have had poor financial health which can be seen in the increased levels of poverty and unemployment. Income inequality levels were slightly higher in Stellenbosch than other Municipalities in the Cape Winelands District and the Western Cape. While the area also experienced an increase in the number of indigents between 2014 and 2016, implying an increased demand for indigent support and additional burden on municipal financial resources.

The economy of the Stellenbosch municipal area has not fully recovered after the recession, with the five-year average growth rates lower than the 10-year average growth rates. Since 2011, growth dwindled year-on-year to reach 0.5 per cent in 2016, the lowest experienced by the local economy since the recession when the economy contracted by 2.9 per cent. The sectors contributing to the decline in growth for the 2016 period are mainly the primary and secondary sectors (excluding the construction sector). This indicates that even though the agriculture sector contributes less to the overall economy in terms of GDP, it is still a valuable local sector.

There are approximately sixty thousand dwelling units projected over the next 20 years with close to fifteen thousand of that to be realised in the short term (< 5 years). Over the long-term the top areas identified within Kayamandi, the Stellenbosch CBD, Klapmuts and Franschhoek.

Description of the Regular Daily Public Transport System

MBT

There are a number of MBT services in Stellenbosch Municipality which operate from a few main hubs i.e. Stellenbosch, Kayamandi, Franschhoek and Klapmuts. The town of Stellenbosch is the key administrative hub for the municipality and most routes are either destined or originated from the main MBT facility called Bergzicht Rank which is located in the CBD area. MBT's serve local residential neighbourhoods such as Kayamandi, Idasvalley, Cloeteville, etc. as well as to the town of Franschhoek and Pniel. There is a strong functional relationship with the City of Cape Town, Drakenstein and Breede Valley Municipalities with a number of inter-municipal routes serving destinations daily. Long distance services are also provided to other locations outside of the Western Cape Province.

Further analysis of this current MBT route list for Stellenbosch Municipality was found to be extremely problematic for a number of reasons. It was decided that the best way forward was to prepare a revised list of routes for Stellenbosch. This exercise was focused on the local routes. No modifications were made to the long distance routes.

Bus

The bus route operated by Golden Arrow Bus Service (GABS) between Stellenbosch, Somerset West and Strand was cancelled due to low ridership. Existing inter-municipal commuter bus services are in operation in the Stellenbosch Municipal area during the morning and afternoon peak periods. They are the following:

- Mitchell's Plain Town Centre to Stellenbosch via Luzuko
- Stellenbosch to Golden Acre

The University of Stellenbosch operates weekday shuttle services to and from various campus destinations to decentralised parking facilities. These services are mostly free of charge and are exclusively for the use of students and staff. Transports Tygerberg residence students who have made bookings between the campus collection point and a nearby shopping centre, currently Tyger Valley (Mon - Wed) and Parow Centre (Thursday).

Rail

The Western Cape has an extensive rail network providing linkages between various parts of the Province as well as beyond the Province boundaries. The network has both passengers and freight movement. The current operator of the passenger rail network is Metrorail, a member of PRASA, which provides a scheduled service. Metrorail currently provides a minimal passenger rail service to areas within the Stellenbosch Municipal area. The total length of railway line within the municipality is approximately 18 km. There are only seven railway stations which fall within the Stellenbosch Municipal area. There has been a significant decline in Rail usage over the past few years. This decline has been due to poor service and declining rolling stock and infrastructure.

Other Public Transport Services

Long Distance and Cross Border

There are three long distance commercial bus services that travel through Stellenbosch Municipality namely:

- Greyhound
- Translux
- Intercap

Long distance passenger rail services are offered by Shosholoza Meyl, Premier Classe and The Blue Train that operate between Cape Town and Johannesburg, with connections to Durban, East London and Port Elizabeth. There is no direct access from within Stellenbosch Municipality but could be connected via Wellington, Bellville or Worcester.

Non-Motorised Transport

Stellenbosch is a town characterised by a walkable CBD, a very attractive environment, and relatively short travel distances between surrounding residential areas (Kayamandi, Cloeteville and Idasvalley). The location of the US within the CBD with students walking primarily between venues, also adds the demand for various forms of NMT within the town. Sidewalks make up 80% of the existing Non-Motorised Transport (NMT) infrastructure in SM. There are approximately 120km of sidewalks and 30km of cycle infrastructure. Of that, more than half is located in Stellenbosch town and surrounds.

Health Services

The provision of health transport services is a provincial function and provided by HealthNET (Health non-emergency Transport) provides for non-emergency patients between home and facilities, or between multiple facilities. Patients are booked using an online system that ensures that seats are allocated equitably and no patients can be overbooked. Bookings can only be made through the provincial health care facility (hospital/clinic) and patients receive a reference number and data of collection. There are 90 HealthNET vehicles operating in the Western Cape.

Institutional and Organisational Structure of Public Transport Industry

MBT are the main mode of public transport in Stellenbosch. MBTs are structured into taxi associations. There are 3 taxi associations that are active in SM.

There are also a few scheduled bus services in SM. These are operated by Golden Arrow Bus Services (GABS) in terms of an operating contract with the Western Cape Government.

The passenger rail service is operated by Metrorail a division of PRASA.

Although SM does not have direct control over these management entities, it is important for them to foster good relationships with transparent and regular liaison.

Roads and Traffic

Stellenbosch is strategically located within the Western Cape Region and operates closely with neighbouring municipalities particularly the Cities of Drakenstein and Cape Town. The Western Cape Provincial Government in their spatial planning has recognised the region as a functional area (see Spatial Development Framework section). This regional functioning relies on key higher order network

of roads to support the demand for access between towns within the functioning region. Stellenbosch is strategically located within this functional area. SM contains a total of 312km road network. The highest are 160.1km (51%) of access and 52.9km (16.9%) of collector roads in Stellenbosch. Franschhoek (32.2 km) and Klapmuts (20.8 km) has the next largest extent of road network. 288.5km (92%) are flexible paved roads and 11.1 km (3.5%) are gravel roads. The majority of the roads in SM are in category 1-very good or category 2- good. Franschhoek, Pniel, Raithby and Stellenbosch have a small portion (total of 1.3km) of their roads in very poor condition.

The town of Stellenbosch has the highest number of attractors in the municipality and thus traffic volumes to and from town are much higher than elsewhere in the SM. It is estimated that a total net number of 18,000 persons are entering the CBD during the weekday AM peak. Based on surveyed data, the vehicle split is 93% Light vehicles: 3.7% MBTs:0.2% Bus: 3.1% Heavy Vehicles.

Freight Transport

Freight routes shown entering the Stellenbosch Municipal Area from Cape Town are Bottelary Road (the M23) and Polkadraai Road (the M12). The R44 from north and south of Stellenbosch, the R304 and the R310 west and east, the R101 and the R45 and the R301 in the Franschhoek Valley also carry significant volumes of freight to/from areas within Stellenbosch Municipality. Heavy vehicles do impact the already congested access roads through Stellenbosch particularly to access local industrial areas. Deliveries to businesses in the Stellenbosch CBD have been noted as being particularly problematic during peak travel times

Financial Information

Adequate funding to realise transport projects listed in the ITP is always a concern. Typically the lack of progress on transport projects listed in the previous ITPs can be specifically attributed to this factor.

The extent of next three financial years future transport budgets is shown in this section. Transport is a sub-sector of Infrastructure Services. Availability of funding to implement the prioritised projects is limited. While the various transport projects compete against each other for funding, they also compete with other essential services such as water, housing, health, etc. The main existing sources of capital funding include capital replacement reserves, provincial grants, national grants, external loans as well as a few other sources.

Successful implementation in the future of the comprehensive vision for transport in SM will heavily rely on finding innovative solutions for funding.

4. Spatial Development Framework

Transport systems and land use patterns are directly related and influence each other. The system of roads, public transport and other transport elements impact land use development, while the nature and distribution of land uses affect travel patterns and the location of transport infrastructure because it drives where people live and work.

The spatial development framework chapter summarises the existing land use patterns or spatial structure as well as provides an overview of the agreed spatial direction and growth as sourced from existing spatial policy frameworks. These Policy Frameworks offer the agreed direction for

Stellenbosch's growth which offer a picture for how the demand for travel should be planned for by future transport systems for Stellenbosch.

Spatial Structure

Stellenbosch, Franschhoek and Klapmuts serve as being the main urban hubs or settlements. The town of Stellenbosch dominates as the largest urban area and acts as the administrative centre. The town is a historic university town and has been growing rapidly over the past few years.

In addition to the larger settlements, there are also a number of smaller villages, including Jamestown, Pniel, Johannesburg, Lanquedoc, Lynedoch, and Raithby. Smaller nodes have emerged around agricultural service centres, for example, Koelenhof and Vlottenburg.

Stellenbosch operates closely with neighbouring municipalities particularly the Cities of Drakenstein and Cape Town. In fact the Western Cape Provincial Government in their spatial planning has recognised the region as a functional area. This Cape Town Functional Area includes The City of Cape Town, major towns within Cape Winelands, West Coast and Overberg District Municipalities as well. The implication of this functioning is across economic and social activity with a significant increase in demand for access between towns within the functioning region.

Housing Projections and Proposals

In order to understand the future demand for public transport travel from the various neighbourhoods or towns in the Stellenbosch Municipal Area, the proposed developments was sourced from the Planning Department.

Current and project trips as sourced from the latest Roads Master Plan for Stellenbosch Municipality shows 2018 trips to be approximately 26 500 split 54:46 low to high income groups based on an average of 1.08 and 1.12 worker per higher and lower income groups respectively. Two future 20 year growth scenarios were modelled (a more conservative trend and a slightly higher or more intensive densification). The future trips are projected to increase to between 48 000 (trend) and 49 000 (densification) by 2040. These additional trips and the distribution of new developments will need to be accommodated for in the transport system.

5. Transport Needs Assessment

The SDF, IDP, Budget, Sector Plans as well as major municipal policies, by-laws, decisions, etc. all have public consultation to ensure that they are developed with community inputs and reflecting community needs. Individual ward meetings were held in October 2019 to determine the needs of the community that need to be addressed to improve the quality of life of residents in the greater Stellenbosch area. A summary of the transport needs from the gap analysis (vision vs status quo) supported by needs recorded as part of the consultation process is discussed below according to broad themes:

- A need for an improved public transport system
- Better accommodate all people including those with disabilities
- Provide walking/cycling paths and green spaces
- Upgrade roads infrastructure
- Additional parking and park/ride facilities

- A need for better road safety, traffic calming and improved law enforcement
- A Need for More Jobs and Skills Training

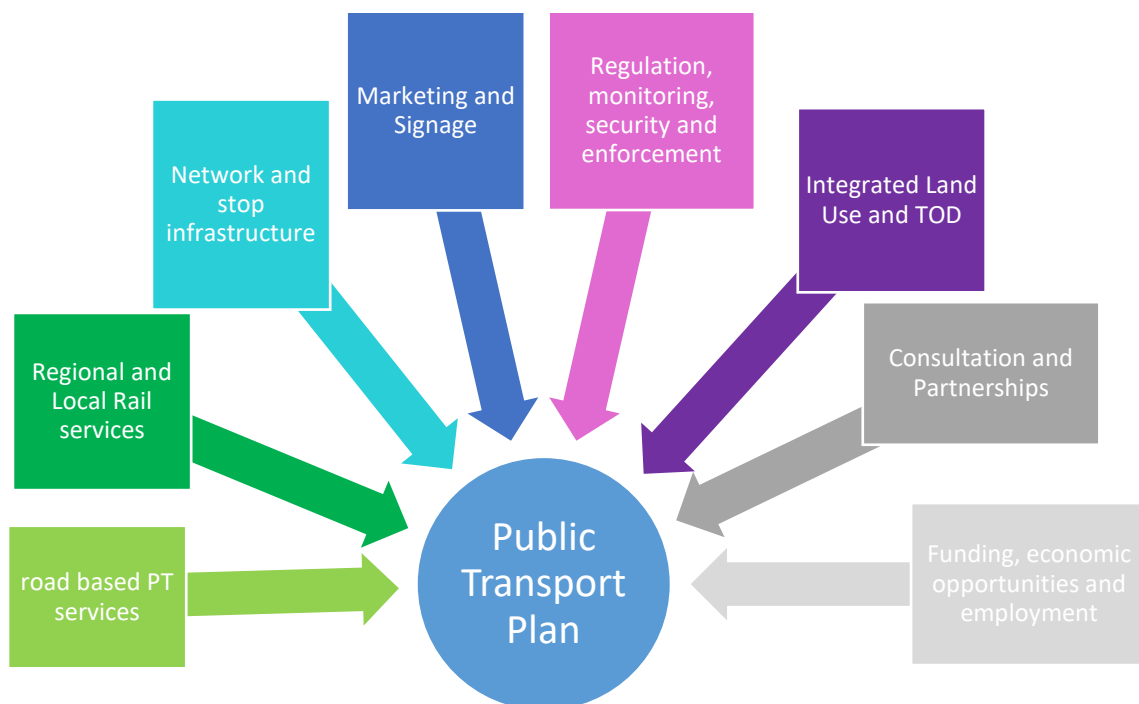
6. Public Transport Plan

Some of the concerns around current state of public transport include:

- Poor integration with other modes
- Limited access of existing PT services
- Services concentrated during peak periods
- No travel time advantage
- Limited PT infrastructure
- Rail is unreliable
- Not universally accessible

It is imperative that a comprehensive and feasible PUBLIC TRANSPORT PLAN urgently be developed for the municipality in order for SM to have a clear step by step plan of how to realise this type of public transport system. In absence of this plan, this chapter provides a broad concept of the strategic components required for public transport in Stellenbosch.

The figure below lists some of the strategic components that would need to be unpacked further as conceptual building blocks to the public transport system.



Strategic Components of the Public Transport Plan

Some initial recommendations for public transport improvements and possible projects/actions have been proposed but will need to be unpacked in greater detail as part of the Public Transport Plan. These cover the following improvement elements.

- Road upgrades or new links to improve regional road based public transport services

- Rail as a means to improve regional and local connections
- Short-term solutions that could be quickly implemented to improve PT customer experience in the interim
- Operational elements that could be implemented for longer term improvements on PT
- Additional services to improve regional road based connections
- Additional services to improve local, intra-municipal or neighbourhood Services (Idas Valley, Cloeteville, Kayamandi, Franschhoek, Klipmuts, Vlootenberg, etc.)
- A local CBD circulation services (Stellenbosch, Franschhoek, Klipmuts) to improve internal access in the centre of main towns in SM.

Operating Licensing Plan (OLP)

One of the key efforts as part of the OLP was to simplify and streamline the Stellenbosch Municipality's MBT route descriptions and route numbers. This will make a significant impact into keeping track of routes, the number of OL's and enforcing whether vehicles are operating according to their legal authorities. The revised routes have provided unlimited access within residential neighbourhoods which the routes serve. This should facilitate collection and drop-off of passengers within these neighbourhoods. The process of registering these changed routes within the PRE will be undertaken as a priority.

The revised routes together with the correct vehicle registration numbers for vehicles who have authority to operate on the routes is readily available for traffic law enforcement to be able to easily enforce those vehicles which are illegally operating. There is no excuse for operators to be operating illegally since they have had the opportunity to input in the revised routes.

This section of the OLP summarises the following key areas:

- Number of MBT Operating Licences vs Routes
- Illegal Vehicles
- Vehicle and route utilisation
- Operating Licence Analysis and the routes which indicate additional OLs could be considered.
- Reduce number of Route Authorities
- Greater Enforcement of Legal Vehicles
- Additional OLs in Growth Areas
- Modify and Correct Route Descriptions
- Deceased Operating Licenses

7. Transport Infrastructure Strategy

The needs assessment, gap identification and vision for transport emphasises that the key areas of implementation for SM must be towards achieving:

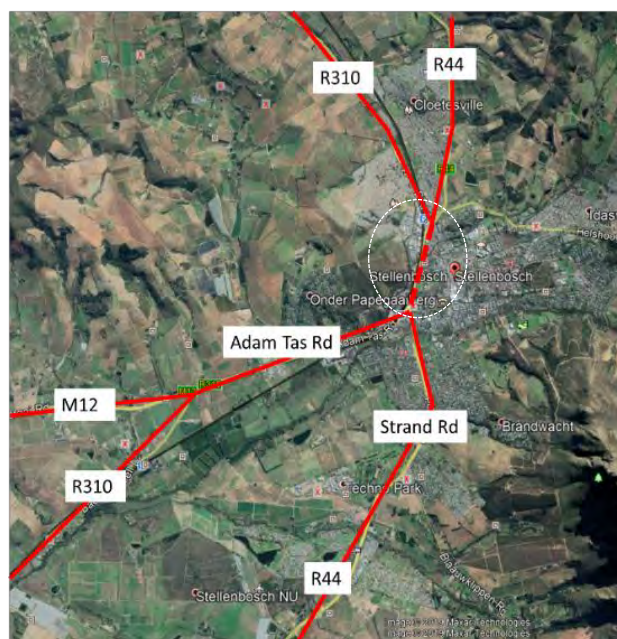
- A well functioning road network with good regional access
- An effective public transport system with good regional access and local public transport
- A walkable and cyclable centre of town

The transport infrastructure strategy deals with the development and maintenance of all types of transport infrastructure, including major roads, public transport facilities, freight corridor measures, non-motorised transport infrastructure, and rail infrastructure. It includes proposals for new facilities and for the improvement of existing public transport facilities and major roads. Only firm schemes earmarked for the next five-year ITP planning period has been included in the strategy. The transport infrastructure strategy will also include measures aimed at realising the goal of making transport in Stellenbosch more sustainable by giving priority to public transport, walking and cycling.

There are also a number of developments planned which indicates that Stellenbosch has the potential to double in 10 to 20 years. The university also have plans for expansion and growing needs for student housing. These type of developments and increased densities will place additional pressure on the existing transportation system in particular the regional and local road network. While the location of the town in the region context means that there will always be a demand for north-south and east-west through (non-local) traffic.

The current road network is at capacity during peak hours for certain links particularly the link Adam Tas/R44 between north (R310 and R44) and east (Adam Tas, M12 and R310) and south (Strand/R44). There is no scope to accommodate any growth in through traffic and more so any increase in land use. This will be the case regardless of any improvements to public transport service and/or making the town more walking/cycling friendly. There is only one regional access linking north and south parts of the Town of Stellenbosch which is via Adam Tas (R44). Existing traffic volumes and congested conditions indicate capacity along this road section is already constrained.

It is essential that the road network be improved with respect to capacity and through access. This is to ensure the 'survival' of Stellenbosch as a "functional town", extra road space must be created in conjunction with the other transport solutions such as an effective public transport system, car-free/less walkable and cyclable areas and strategically locating parking areas to effectively remove vehicles from the car-free areas.



Adam Tas Rd only link between North & South

The most important question for Stellenbosch's future is "How to create the required road space" while maintaining the critical and important characteristics of the town, most importantly a friendly walkable/cyclable environment.

Some of the options for network improvements could for example include:

- A Western Bypass
- Extra capacity along Adam Tas Road/Strand Street with additional side ride linkages

- Franschhoek R45 access improvement
- Klapmuts access
- Eastern link (planning and reserving space)

The required road space is a hugely controversial and sensitive issue for many people in Stellenbosch. But it is critical that ways to improve road network access and capacity be explored as a matter of urgency. It needs to be undertaken in a consultative manner, involving citizens as much as possible in the process to find a balanced solution.

8. Travel Demand Strategy

Growing congestion and increased travel times are symptoms of a growing demand for travel and increased vehicle ownership particularly during peak periods. Travel Demand Management (TDM) incorporates various initiatives to manage demand for less efficient, single occupancy private vehicle trips. It is accepted that TDM initiatives to manage private vehicle trips can only be successful if there are good alternative modes of travel. A detailed TDM strategy still needs to be prepared but some components could potentially include:

- Parking management strategies; including park and rides with parking garages constructed outside of the CBD combined with reduced parking and/or increased parking tariffs
- Alternative work from home schemes, staggered start-times or flexible work schedules
- Incident management systems for more efficient handling of incidents to improve emergency response, incident detection, alternative route deviations, etc.

9. Non-Motorised Transport Strategy

Certain strategies and policies have to be adopted to arrest the gradual prioritisation of cars over people, to ensure that non-motorised transport users are prioritized in transport planning and street design. Stellenbosch Municipality has adopted the following vision for pedestrians and cycling:

“Stellenbosch Municipality will strive to develop walkable and cycle-able environments that are safe for all to use and contribute to the mobility needs, economic vibrancy and social health of communities.”

This can be translated into the following Strategic Objectives:

- Connect the outlying communities with the CBD in a safe and attractive manner and improve safety, access to opportunities and the dignity of these communities.
- Strive towards car-free living in Stellenbosch CBD.
- Achieve a modal shift in the Stellenbosch CBD towards public transport, walkability and cycle-ability.
- Creating dignified living spaces in previously disadvantaged areas

A network of pedestrian and cycle paths have been prepared for SM and priority projects have been identified. Considering the current budget constraints and the likelihood of implementation, only

short-term proposals were extracted, and cost estimates prepared. The short-term projects were further refined into (1) High (essential) and (2) Medium (desirable). The extent of the proposed short-term pedestrian and cycle routes amount to 28km (10% of the total network). 70% of the proposed infrastructure is located in the wider Stellenbosch town area. Over time as the portions of the route are implemented, it will ultimately form a coherent NMT Network.

10. Freight Movement

Freight movement forms a significant portion of trips in Stellenbosch. Movement of goods is critical and an effective freight transport within a broader integrated network forms a vital part of Stellenbosch's integrated transport network that will either support or hinder future economic growth. Poor condition and inadequate capacity of key transport infrastructure will have negative impact such as increasing costs and lowering reliability.

In the absence of a detailed freight strategy being available for SM, this chapter is a summary notes from the last Stellenbosch CIP (2018) and the Western Cape Freight Study (2019). In February 2012, GIBB prepared the "Cape Winelands District Freight Strategy" which focused on the existing freight movements and facilities within the District. The report notes that the major freight routes close to Stellenbosch town are the connections between Stellenbosch and Somerset West (R44), Stellenbosch and Kuils River (R310), Stellenbosch to Klapmuts (R44 north), Stellenbosch to Brackenfell (R304) and Stellenbosch to Franschhoek (R310). The portion of the R45 between Villiersdorp and Paarl is also a major freight route for the region. The report furthermore identifies secondary routes that:

- Provide access to farming areas.
- Carry freight in the form of supplies for agri-processing (e.g. delivery of bottles).
- Distribute the finished product (e.g. delivery of wine) to the Port of Cape Town for export.

11. Other Transport Related Strategies

There are other transport strategies including the Law Enforcement Strategy and Tourism Transport Strategy that need to be prepared for incorporation into the future CIPs. For now only the Universal Access Strategy has been summarised.

Universal Access

It is important that the transport environment including public transport services and transport infrastructure are accessible for people with special needs, which is typically referred to as "universal access design." Universal design is an approach to create an environment that meets the needs of all potential users to the greatest extent possible. Taking into consideration the diverse abilities of individuals, such as agility, balance, cognition, coordination, endurance, flexibility, hearing, problem solving, sensory processing capacity, strength, vision, and walking speed; it emphasises inclusive design that ensures participation and access for all. In the SM these accommodations or provisions have been limited. Concerns around this include:

- Limited infrastructure provision for people with special needs.
- Public transport vehicles i.e. road based MBTs or buses as well as rail is not specifically tailored to accommodate universal access.

- Some intersections have dropped kerbs and tactile paving, but not all intersections in SM have this treatment.
- Access into buildings are sometimes equipped with ramps for wheelchairs and prams.
- Network of pathways and sidewalks are not comprehensive.

SM transport system is unfortunately still far from universally accessible. In the absence of a Universal Access Strategy for Transport, the following list of projects are identified:

- Universal Access Strategy for Transport which defines SM's position of accommodating Special Needs on public transport vehicles, within road, public transport, NMT infrastructure and whether there are any discounted fares or subsidisations to be included.
- Infrastructure improvements such as dropped kerbs on sidewalks with obstructions placed in the centre (e.g. poles) and tactile paving for pedestrians with impaired sight, create difficulties for the user to access the sidewalk.
- Planning of the public transport system and NMT network should incorporate universal access design principles that will assist special categories of passengers to move comfortably from one place to another.

12. Funding Strategy and Summary of Programmes

The table below provides a summary of the total budgets estimated to be required for the full list of projects by the various project categories. Project values are shown in **millions of Rands**. These totals are based on the individual list of projects identified for each category including planning, public transport, road infrastructure and NMT projects.

Table: Project Budget Totals per Category

Project Category	Project Budgets Per FY in Million Rands R'000 000					
	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Integrated Planning	R2.00	R2.20	R3.70	R3.20	R2.20	R13.30
Public Transport	R39.80	R18.25	R13.00	R8.50	R7.50	R87.05
NMT (Walk/Cycle)						R126.30
Road Infrastructure	R0.00	R215.90	R346.10	R1 003.90	R265.50	R1 831.40
TOTALS (Millions Rands)	R41.80	R236.35	R362.80	R1 015.60	R275.20	R1 931.75

Note project costs are in Million Rands.

13. Stakeholder Consultation

The overall aim of the consultation process is to ensure that relevant stakeholders have adequate opportunity to provide input into the concept development process. Consultation for this project will be undertaken at various levels; Project Team Meetings and identified role-players and stakeholders.

Stakeholders consulted included:

- SM officials from Transport, IDP, Infrastructure, economic planning and land use development (from visioning workshop and project management meetings)
- WCG provincial officials (road and public works) (from visioning workshop and project management meetings).
- CWDM officials (transport planning from visioning workshop)
- US representatives (Visioning workshop)
- MBT associations (MBT consultation sessions for OLP)
- General public (from IDP public consultation process)

14. Way Forward

Typically the CIP is updated annually with a full review required every 5 years. It is recommended that the next series of updates and reviews focus on the outstanding sector plans required to comprehensively update these chapters in the CIP report. These chapters in order of priority are as follows:

- Short Term Years 1-2
 - Public Transport Plan
 - Freight Strategy
 - Law Enforcement Strategy
 - Universal Access Strategy
- Medium Term Years 3-5
 - Travel Demand Strategy
 - NMT (Cycling and Walking) Plan Review
 - E-Hailing Strategy
 - Tourism Transport Strategy
 - Transport Register and OLP Review

1 INTRODUCTION

1.1 Background

The preparation of the Comprehensive Integrated Transport Plan (CITP) is the responsibility of the Stellenbosch Municipality (SM) as outlined in the National Land Transport Act (NLTA) and is designed to provide a vision of transport for the municipality, a register summarising the condition and issues for transport, as well as listing priority projects and an developing an implementation plan that duly emphasises the transport urgencies for the municipality to respond to.

The SM's last CITP¹ was approved by the Provincial Minister of Transport and Public Works in terms of section 36(4) of the National Land Transport Act (NLTA), Act 5 of 2009 in October 2018.

SM appointed Innovative Transport Solutions (ITS) to undertake the annual 2020 update of the SM CITP in accordance with the regulations published by the Minister dated 29 July 2016, Minimum Requirements (MR) for the Preparation of Integrated Transport Plans, 2016 no 881.

1.2 Purpose of the CITP

As part of a legislated development planning process all municipalities have to compile an Integrated Development Plan (IDP). The ITP is a specific sector plan that feeds into the IDP. Ultimately the ITP also forms part of the development of the Provincial Land Transport Framework (PLTF). The preparation of the ITP is a legislated requirement as set out in the National Land Transport Act 5 of 2009 (NLTA). According to the new MR as prescribed in the Government Gazette no 40174 dated 29 July 2016 the ITP must comprise of a Transport Register which summarises information about transport operations and a Public Transport Plan, which is primarily an Operating License Plan (OLP) which plans and guides public transport in the given area of jurisdiction. The OLP will specifically plan and guide the management of Minibus Taxi operating licences and will be based on the findings of the latest 2019 surveys² together with consultation with the Taxi Associations (TA).

The CITP provide guidance to the planning authority on all forms of transport in the SM including:

- Public Transport, including MBT, bus and rail as well as local and inter-municipal commuter services.
- Non-motorised transport or more sustainable modes of walking and cycling
- Other types of public transport such as long distance or cross-border, transport for learners, meter-taxis or other e-hailing services
- Private transport and roads
- Goods and hazardous substances movement

¹ Comprehensive Integrated Transport Plan for Stellenbosch, October 2018

²..Minibus taxi surveys were undertaken in 2019 as part of the update of the SM Operating License Plan.

1.3 Study Area

Stellenbosch LM forms part of the Cape Winelands District Municipality (CWDM). It lies south of the other local municipalities in CWDM i.e. Drakenstein, Witzenberg, Breede Valley and Langeberg as shown in Figure 1.1. SM covers an area of approximately 830 km². It includes the towns of Stellenbosch, Franschhoek and settlements such as Klapmuts, Koelenhof, Kylemore, Johannesdal, Pniel, Jamestown and Raithby. Stellenbosch town is 50 km to the east of Cape Town and is, after Cape Town, the oldest town in South Africa.

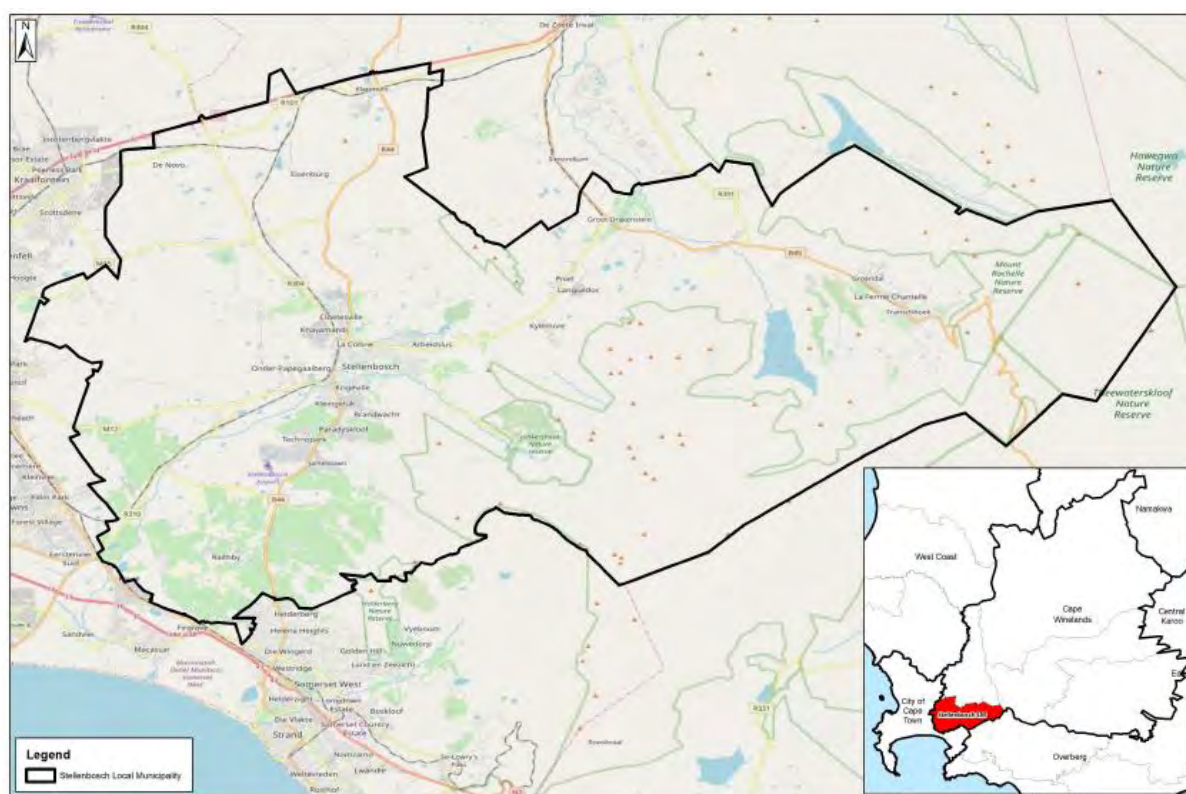


Figure 1.1: Map of Stellenbosch LM as part of CWDM

To the west and southwest it extends as far as the urban edge of the Cape Town metropolitan area, while to the east and southeast it is bounded by mountain ranges. The western part of the municipality around Stellenbosch and the eastern part in the Franschhoek valley are separated by mountains with the Helshoogte Pass connecting the two. The Stellenbosch Municipality abuts the Drakenstein Municipality to the north, the Breede Valley Municipality to the northeast, the Theewaterskloof Municipality to the southeast and the City of Cape Town to the west and southwest.

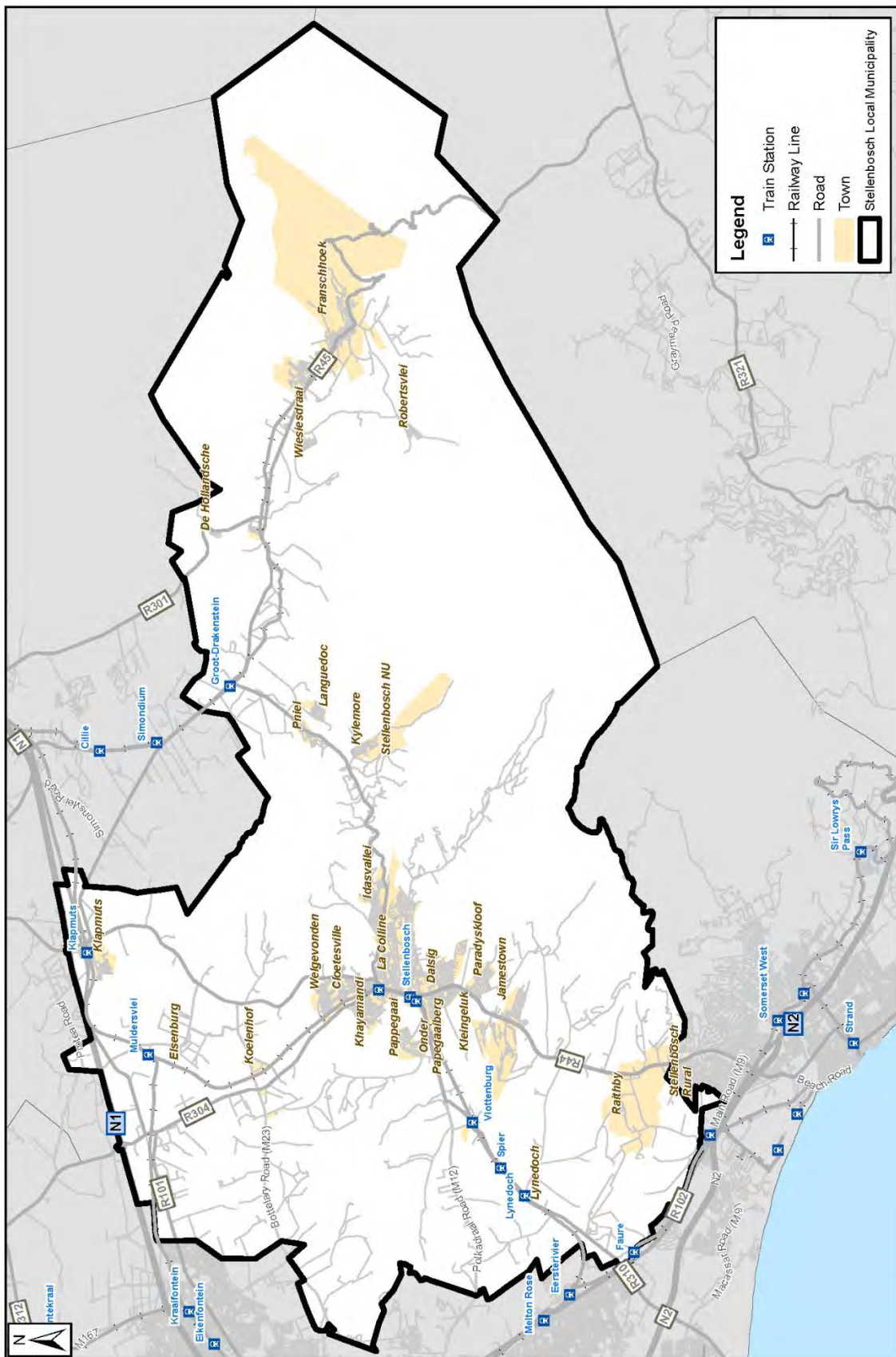


Figure 1.2: Map of Stellenbosch Municipality Neighbourhoods and Towns

Stellenbosch Municipality has a total population of 155 733³. with a density of approximately 190 people per square kilometre. A major portion of the Stellenbosch Municipal area is utilised for agriculture (mainly wine production) and about half of the residents of the municipality live in Stellenbosch and its suburbs, which have a total population of 77,476. The second-largest town is Franschhoek with 15,616 residents. Klapmuts (pop. 7,703) is situated on the northern edge of the municipality next to the N1 national road. In the Helshoogte Pass between Stellenbosch and Franschhoek are the villages of Pniel (pop. 1,975), Kylemore (pop. 4,328) and Languedoc (pop. 4,289). Other rural settlements in the municipality are Jamestown (pop. 2,840), Koelenhof (pop. 302), Lynedoch (pop. 108), Raithby (pop. 908) and Wiesiesdraai (pop. 1,727).

1.1 Layout of the Report

The CITP report is divided into the following chapters:

- Chapter 1: Introduction provides a brief overview of the project, the study area and the project methodology
- Chapter 2: Transport Vision and Objectives describes the position and policy statements guiding transport for Stellenbosch Municipality.
- Chapter 3: Transport Register summarises the various types of transport in Stellenbosch Municipality.
- Chapter 4: Spatial Development Framework provides an overview of the spatial structure and land use framework which will influence the transport for Stellenbosch Municipality.
- Chapter 5: Transport Needs Assessment discusses the transport needs identified for the area.
- Chapter 6: Public Transport Plan describes the components identified to improve public transport for the municipality.
- Chapter 7: Transport Infrastructure Strategy summarises the strategy to improve transport infrastructure for various modes of transport.
- Chapter 8: Travel Demand Strategy provides an overview of the interventions to manage the travel demand better towards more sustainable transport.
- Chapter 9: Non-Motorised Transport summarises the strategies and plans toward more sustainable modes of walking and cycling.
- Chapter 10: Freight Transport Strategy summarises the goods and hazardous substances networks as other strategies to support effective freight movement.
- Chapter 11: Other Transport Related Strategies summarises the improvements proposed for other transport including public transport safety and security, road user safety, law enforcement, tourism and accessible transport.
- Chapter 12: Funding Strategy and Summary of Programmes provides a description of the extent of funding, funding sources as well as the list of programmes per transport sector strategy.

³. South African National Census, 2011

- Chapter 13: Stakeholder Consultation describes the extent of participation and consultation that was undertaken to prepare the CIP.

Annexures contain the following:

- Annexure A: Summary of International Case Study Review
- Annexure B: Descriptions of New Routes⁴
- Annexure C: Maps of New MBT Routes

1.4 Project Methodology

Figure 1.3 overleaf provides an overview of the methodology used to prepare the Update of the CIP for Stellenbosch. It includes the following tasks:

- Task 1: Inception and Project Management
 - 1.1 Inception and Planning
 - 1.2 Project Meetings
 - 1.3 Invoicing and Progress Reports
- Task 2 Literature survey of existing planning documentation
 - 2.1 Collection & review of relevant planning documentation + Assessment of gaps
 - 2.2 Stakeholder Consultation
 - 2.3 Assessment of Data and Information Gaps
 - 2.4 Analyses & Synthesis of existing information
- Task 3 Analyses and Scenario Evaluation
 - 3.1 Analyses and Scenario
 - 3.2 Develop strategies and projects
- Task 4: CIP Development
 - 4.1 Various transport chapters within the CIP
 - Transport Vision & Objectives
 - Transport Register
 - SDF Summary
 - Transport Needs Assessment
 - Public Transport Plan
 - Transport Infrastructure
 - Travel Demand Management
 - Non-motorised Transport
 - Freight Strategy
 - Funding Strategy & Implementation Plan
 - 4.2 Report production
- Task 5: Stakeholder Consultation

4. Stellenbosch Municipality Transport Register and Operating Licensing Plan, 2019

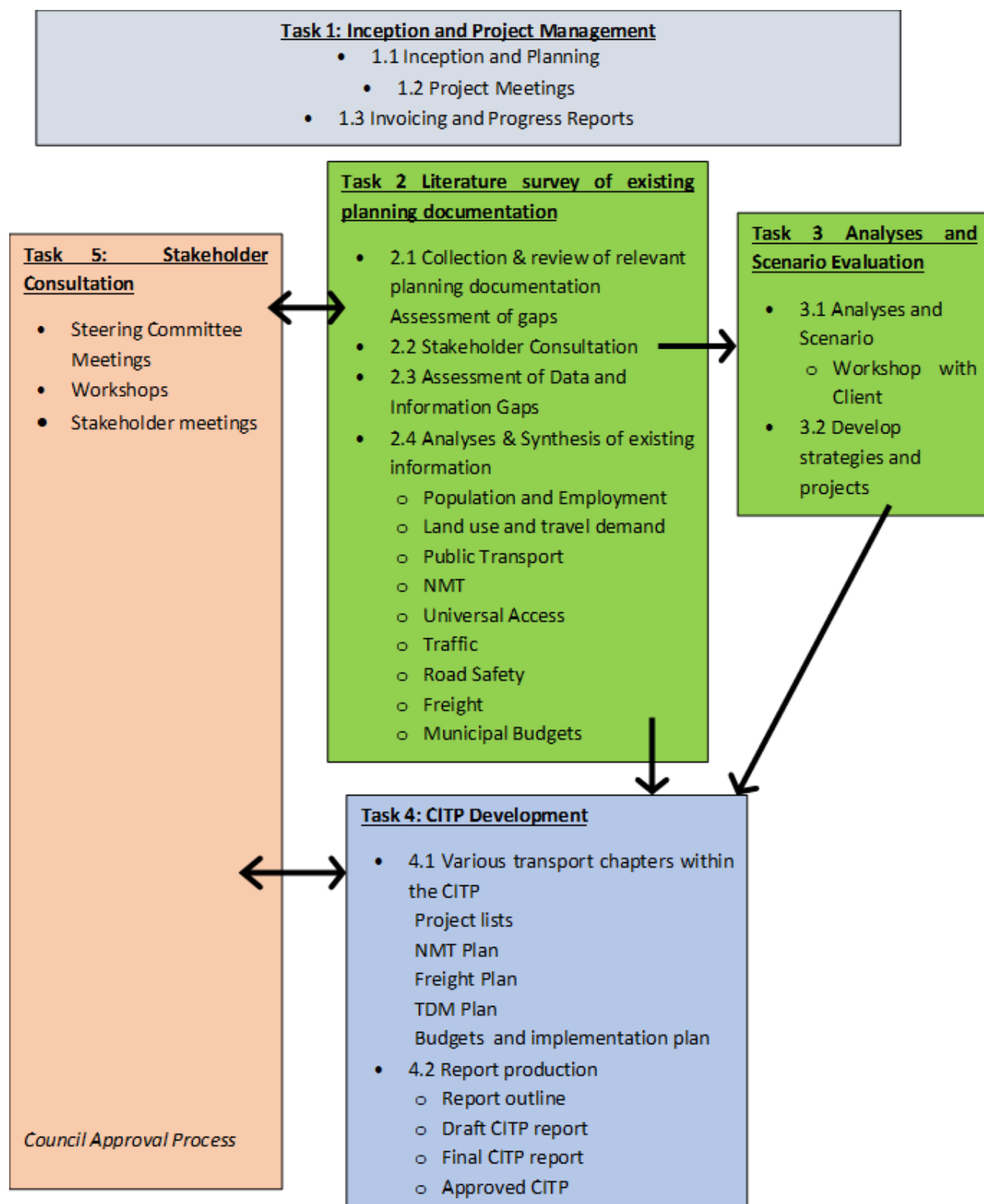


Figure 1.3: Project Methodology

There are various planning and policy documents which provide Stellenbosch's position on future growth and development. These offer the key direction or planning philosophy, the essence of which has been incorporated into this CIP for Stellenbosch.

For example a key principle for Stellenbosch is the need to ensure that future development is sustainable and with more sustainable forms of transport. There is consensus that this requires good integration between land use and transport with increased densities, more transit orientated developments (TOD) and improved public transport and non-motorised transport options.

This CIP is an annual update and is thus not a full overall review of the CIP which occurs every 5 years. Thus, where secondary data or relevant policies/plans were available, these were reviewed and summarised into their respective CIP chapters.

In order to assist with the management of the project, a project management team was established to:

- Review findings and recommendations resulting from the preparation of the CIP.
- Approve the final report produced
- Facilitate communication between relevant stakeholders, including the CWDM, SLM, WCG, PRE and MBT associations.

2 TRANSPORT VISION AND OBJECTIVES

2.1 Vision Transport Elements for SM

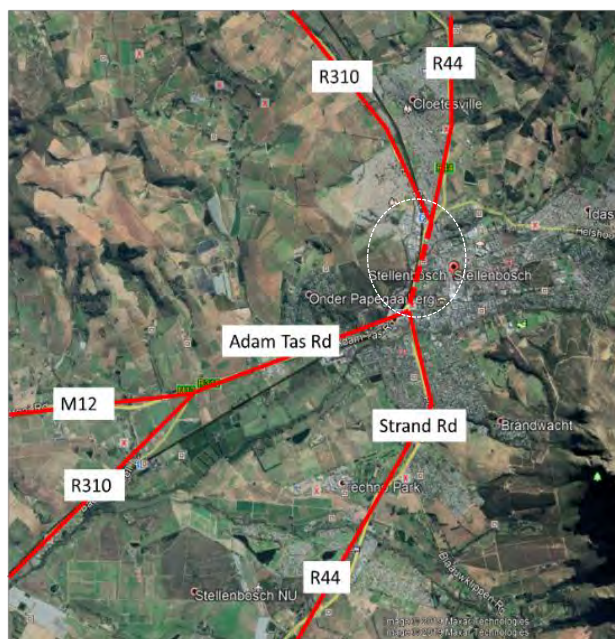
Transport plays a key role in SM future growth and development. It is a critical element of being able to deliver on the municipality's vision as *"a valley of opportunity and innovation"*⁵. It is essential that the picture is clear and agreed upon by all on what the Stellenbosch transport system will need to have in place in order to support future growth opportunities.

Critical Transport Elements for SM to unlock and support its development potential includes:

- A network of infrastructure and services which supports its people and goods movement as part of a vibrant economy.
- Accessibility and mobility at both a local as well as regional level including cost effective and affordable modal options for all of SM's citizens, businesses, and visitors.
- A transport system which is not only feasible now but also sustainable for the future, which supports overarching global, national, provincial and municipal sustainability priorities for future generations.

A Well Functioning Network of Transport Services and Infrastructure

A well functioning network of transport services and infrastructure underpins Stellenbosch's transport effectiveness. Although Stellenbosch currently has a good network of higher order roads, there are constraints particularly around access to and from the Stellenbosch town CBD that will likely hinder growth possibilities if not proactively addressed for the future. There are only limited access points in and out of the CBD as well as around (through-routes) with limited capacity. These have been experiencing constraints particularly during peak periods. A strategic direction needs to be agreed on how these vital access points will be managed in the future.



Adam Tas Rd only link between North & South

Stellenbosch is a major attraction for developers/developments with its proximity and context to the City of Cape Town, access to an international airport rural agricultural and scenic environment and university. It is also strategically located in the Western Cape Province with traffic from Saldanha, Malmesbury and other parts of the

⁵ Stellenbosch Integrated Development Plan (IDP), 2019

West Coast to the N2 and areas beyond Sir Lowry's Pass. There are also a number of developments planned (see 4.2) e.g. Adam Tas Corridor, Bergsig, Bergkelder, Spiet, etc. which indicates that Stellenbosch has the potential to double in 10 to 20 years i.e. 5% growth per year. The university also have various plans for expansion and growing needs for student housing. There are proposals for converting single residential into higher density student housing. These type of developments and increased densities will place additional pressure on the existing transportation system in particular the regional and local road network. While the the location of the town in the regional context means that there will always be a demand for north-south and east-west through (non-local) traffic.

The current road network is at capacity during peak hours for certain links particularly the link Adam Tas/R44 between north (R310 and R44) and east (Adam Tas, M12 and R310) and south (Strand/R44). There is no scope to accommodate any growth in through traffic and more so any increase in land use. This will be the case regardless of any improvements to public transport service and/or making the town more walking/cycling friendly. There is only one regional access linking north and south parts of the Town of Stellenbosch which is via Adam Tas (R44). Existing traffic volumes and congested conditions indicate capacity along this road section is already constrained.

It is essential that the road network be improved with respect to capacity and through access. This is to ensure the 'survival' of Stellenbosch as a "functional town", extra road space must be created in conjunction with the other transport solutions such as an effective public transport system, car-free/less walkable and cyclable areas and strategically locating parking areas to effectively remove vehicles from the car-free areas.

The challenge for Stellenbosch's future is "How to create accommodate for the required road space" while "maintaining the critical and important characteristics of the town". Some of the options for network improvements have been explored over the years. These for example include:

- A Western Bypass
- Extra capacity along Adam Tas Road/Strand Street with additional side ride linkages
- Franschhoek R45 access improvement
- Klapmuts access
- Eastern link (planning and reserving space)

The nature of this required road space is hugely controversial and sensitive for many people in Stellenbosch. But it is critical that the ways to improve road network access and capacity be explored and confirmed as a matter of urgency. It needs to be undertaken in a consultative manner, involving citizens as much as possible in the process to find a balanced solution. Once a common vision on how this road infrastructure should be provided it can be actioned in stages over medium and long term.

A Transport System which offers Accessibility and Mobility for All

The transport solution for Stellenbosch must respond to the needs of all it's citizens, businesses and visitors. That means Stellebosch's transport system must include road infrastructure which supports all transport users including the requirements of private and freight vehicles as well as the effective functioning of public transport services, pedestrians, cyclists and other categories of transport for people with special needs. A well-functioning public transport system, cycling and walking are at the

heart of offering more affordable and accessible transport solutions for the impoverished communities of Stellenbosch.

Improving the quality of the public transport system for SM has been recognised as a critical element of the transport system over the previous CITPs⁶ but achieving it has been fraught with many challenges. These challenges are not unique only to SM and most municipalities across South Africa faces similar constraints in capacity and resources. It is essential for SM to have ratified and agreed upon the broader vision and the components required to achieve an effective public transport transport system. Thus it is critical that a list of realistic actions and mechanisms be identified for how to overcome these main stumbling blocks experienced. It is thus imperative that a comprehensive and feasible PUBLIC TRANSPORT PLAN urgently be developed for SM which includes clear steps for how to deliver on the critical elements.

It will be essential to positively influence the way people think about public transport. Improving the system to make it reliable, responsive to customer needs will encourage more people to travel by MBT or bus and make it more attractive, reliable and competitive to private vehicles.

Although the Municipality has no direct control over MBT and bus service operations it will be imperative to strengthen partnerships and working with MBT associations and operators as well as GABS in order to achieve success. Also, for rail operation and investment good partnerships with SARCC and other decision makers will need to take place to lobby and influence rail services in SM.

A comprehensive network of pedestrian and cycle pathways together with supportive elements such as lighting, safe crossings, car-free zones, bicycle parking, sign posting, etc. are also key considerations for encourages these more sustainable and more accessible modes of transport. An NMT Plan has been prepared and identifies some of the priority projects which will need to be implemented over the short, medium and long-term.

A Transport System that is Sustainable for Future Generations

In order to move towards a transport system that will be more sustainable for future generations it is essential for SM to offer good quality transport alternatives that are more sustainable and which turns around the rapidly growing single occupancy vehicles and rather encourage more people to walk, cycle and to use public transport modes.

Safety and security on transport has become a growing concern for the people of Stellenbosch. Lack of safety and security will definitely discourage people from using the system. SM will need to explore how it can actively include safety, enforcement, regulation and monitoring of the system.

Land use planning plays a critical role in the effectiveness of public transport. Various land uses, such as housing or residential areas, economic activity in business, employment, shopping or industrial centres as well as educational, social and recreational uses, tend to be the generators of travel. Improving the relationship between land uses i.e. where people live and where they want to travel to

⁶ Stellenbosch Municipality, CIP 2014, CIP 2016, CIP 2018

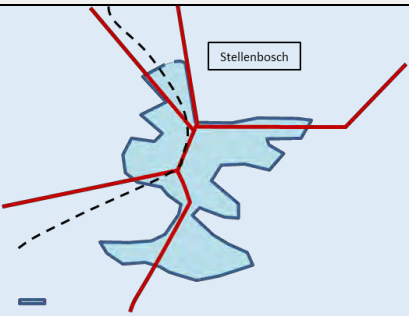
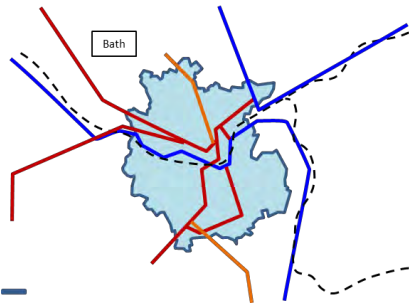
is one of the best ways to encourage clean non-motorised modes of transport such as walking and cycling. Together with improvements to high O-D connections and providing higher densities for new and infill developments.

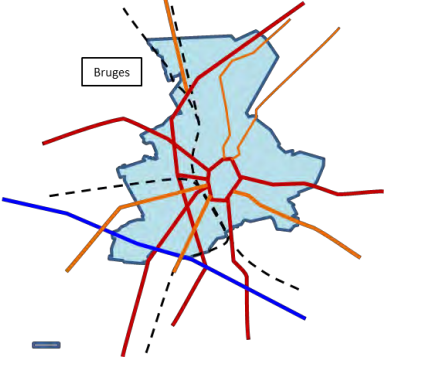
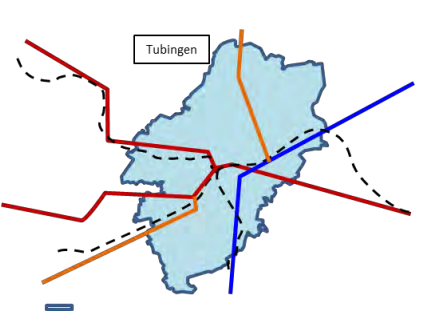
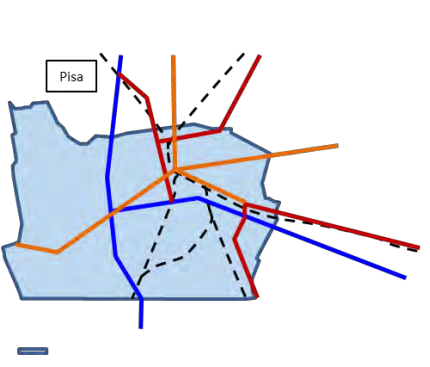
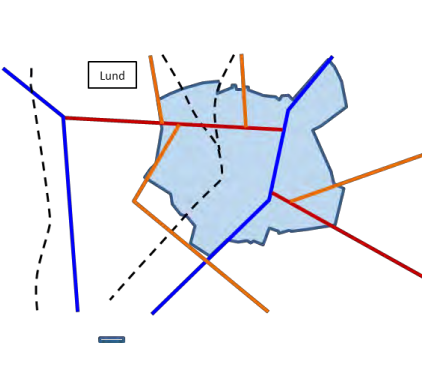
2.2 International Case Studies of University Towns

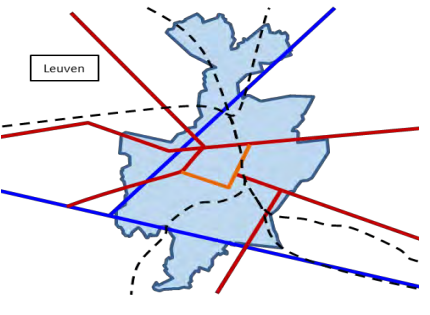
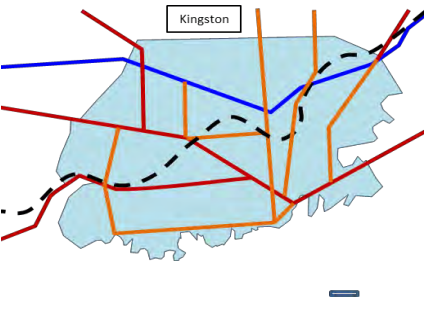
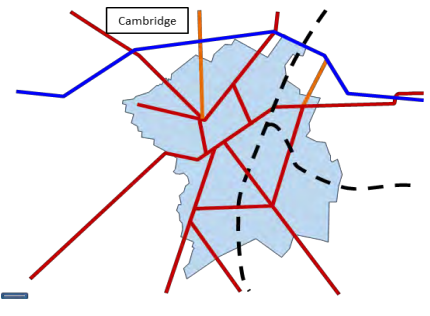
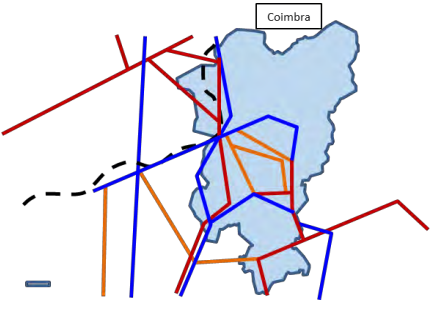
In order to better understand the common elements which are present for successful university towns a review was undertaken of the transport systems of 12 international towns which have strong university presence. These included Bath (U.K.), Bruges (Belguim), Teubingen (Germany), Pisa (Italy), Lund (Sweden), Leuven (Belgium), Kingston (Canada), Cambridge (U.K.), Coimbra (Portugal), Heidelberg (Germany), Uppsala (Sweden) and Ghent (Belgium).

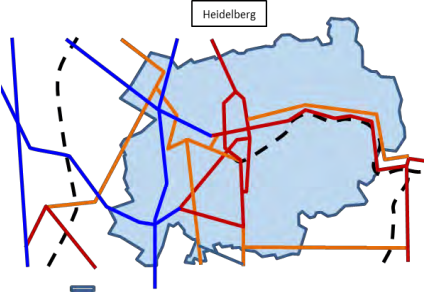
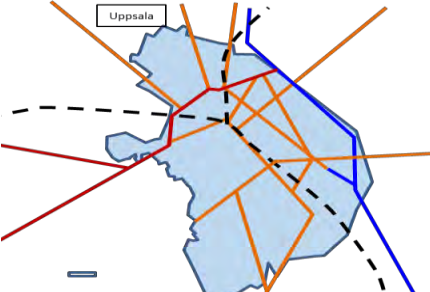
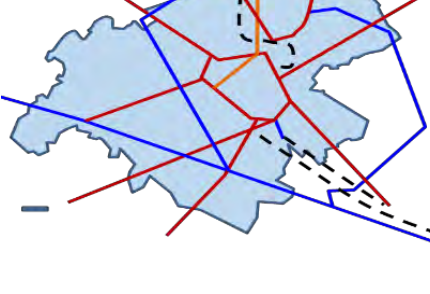
Table 2.1 provides summaries of the 12 international towns reviewed. The table includes the student and total population size, maps of each town/city showing the scale of the urban footprint, the structure of higher order road and rail network as well as a description of the key transport element for each. Annexure A which provide additional information and images for these case study towns.

Table 2.1: Review of Transport System of international University Towns

City/ Town	Map	Notes
STELLENBOSCH		<ul style="list-style-type: none"> • Total population: 90 000 • Student population: 32 000 (36%) • Regional access to town limited • Limited public transport • Limited walking and cycling infrastructure
BATH, United Kingdom		<ul style="list-style-type: none"> • Total Population: 90 000 • Student Population: 17 000 (19%) • Good public transport • City centre well served by local bus system (At least 1/hour; less frequent weekends and public holiday operations) • Hop on-off tourist sight-seeing • Airport service every 2 hours • Regional national express coaches London, Oxford, Southampton, Cardiff and Swansea • Website available for booking services • Rail services to other towns

BRUGES, Belgium		<ul style="list-style-type: none"> • Total population: 118 300 • Student population: 10 000(8%) • Bruges is a large village and most things are within walking distance • Only one form of public transport i.e. bus • Regional rail access but no local subways or trams. • There is a multi-ticket for the city buses you can buy a multi-journey ticket / ten rides pass for 9 euros (price in August 2013), instead of paying 1,30 euro per trip. • Weekdays – 10 min schedule.
TUEBINGEN, Germany		<ul style="list-style-type: none"> • Total population: 90 546 • Student population: 28 000 (31%) • Local bus service with more than 20 bus lines • Local train stations connecting other parts of the city. • Buses all day on weekdays till midnight and night buses after • Regional rail and bus services available from surrounding cities • Integrated ticket and fares. Student cards and free Saturdays. • Free for people with disabilities. Part of fleet marked for wheelchair access
PISA, Italy		<ul style="list-style-type: none"> • Total population: 91 000 • Student population: 41 000 (55%) • Regional rail access to other destinations across Italy. Pisa's main train station, Pisa Centrale, is 1.5km outside of town, which can be reached on foot or by bus. • Does not have rail service – bus, walk or cycle • Bus used to the outskirts of the city, as well as further afield • Running past all the major sites of Pisa is a golden tourist train, which takes you on a 30-minute guided tour through the city
LUND, Sweden		<ul style="list-style-type: none"> • Total population: 92 000 • Student population: 57 000(38%) • Lund Central station is the third biggest station in Sweden and public transport is an integral part of the city. • Regional, national and international trains available • Also regional buses, connect Lund with surrounding cities • Local bus services • One of the best cities in Sweden to cycle. The main cycle paths in Lund are marked in different colours, both on the map as well as on street signs in the city itself. These signs can be found all along the cycle paths in Lund

LEUVEN, Belgium		<ul style="list-style-type: none"> • Total population: 100 000 • Student population: 58 000 (58%) • Regional rail access - Leuven is an important hub in the Belgian railway network • Station located at the edge of the city centre with most university buildings within walking distance • Buses, walking and cycling used for local access • Free student travel within Leuven • Ring bus serves ring road - weekdays • night buses are available after 10 pm
KINGSTON, Canada		<ul style="list-style-type: none"> • Total population: 140 000 • Student population: 25 000 (18%) • Bus service operates in Kingston and neighbouring community of Amherstview • University service and to the Kingston Bus Terminal and the railway station. • Local routes operate Mon–Sat 6:00 to 23:00; Sun 8:30 to 20:30. Run every 30 min weekdays before 19:00; 60 min other • Express services available • Dial a Bus services; specific times and must be booked in advance • Seasonal services during university times of the year • Rack and Roll – bus can accommodate 2 bicycles • Daily, Weekly and monthly passes with free transfers (60 min) • Free for university students
CAMBRIDGE, United Kingdom		<ul style="list-style-type: none"> • Total population: 144 000 • Student population: 23 000 (16%) • Several bus services operate seven days a week • Cambridgeshire Guided Busway has bus services running into the centre of Cambridge with interchanges at the station and Hospital. • five Park and Ride sites offer parking and charging for electric cars. Buses operate on 7 min headways to centre. • Highest level of cyclists in the UK. Some adaptations for cyclists e.g. lights for cycle lanes and cycle contraflows on streets; shared paths in parks but no separate cycle paths. • Two railway stations with direct rail links to London and some other regional towns as well as the airport. • Plans to designate roads for a ring road with traffic restrictions and limited parking
COIMBRA, Portugal		<ul style="list-style-type: none"> • Total population: 144 000 • Student population: 24 000 (17%) • Number of public transport options to and within City. • Network of trolley buses and trains. • Train lines access regional destinations in surrounding areas as well as around the city. • Numerous bus lines. Bus services the most comprehensive coverage of all modes. • Coimbra is the major bus hub in the Beiras region and has a number of regional coach buses to access other towns and cities • Tourist hop-on hop-off services

HEIDELBERG, Germany		<ul style="list-style-type: none"> • Total population: 160 601 • Student population: 32 000 (20%) • Good public transport system (rail, bus and trams) • Strong walking and cycling; network of cycle paths; pedestrian zones • Regional bus to surrounding towns • InterCity Express – ICE regional train system • Local bus with well marked widespread stops across the city. • Streetcars, travel to the nearby towns and suburbs. Buses and trams share stops for easy transfer • Also local trains for shorter destinations to nearby towns
UPPSALA, Sweden		<ul style="list-style-type: none"> • Total population: 168 000 • Student population: 40 000 (24%) • UL provides public transport in Uppsala and surrounding communities. • Regional buses and the Upptåget train system in the county • Commuter services also available between Uppsala and Älvsjö. • Bus service (airport coach) and commuter train to Stockholm Arlanda • Local bus service available in Uppsala • A single ticket costs around 25 SEK. Tickets can be purchased via UL mobile app, UL Card, UL Ticket machines or on the bus (Costlier than other options). • 24-hour passes that are valid within zones and for a combination of zones • Flexible visitor pass providing unlimited travel throughout the county and in Uppsala.
GHENT, Belgium		<ul style="list-style-type: none"> • Total population: 262 000 • Student population: 44 000 (17%) • De Lijn is the public transport provider in Ghent and across the whole of the Flanders region. • Integrated ticketing • There are three main bus stations in Ghent which most transport routes go through: at both the train stations • Tickets are valid for 60 minutes thus allowing for free transfers • Night buses run until 1am every night of the week. • DeLijn app available. • Buses and trams run every day of the year, including public holidays. • Services run less frequently when the schools are on holiday. • Omnipass (monthly) available for residents and often included in salary package. • If you don't have a ticket, or you don't validate it subject to fines between €20 and €500 • Cycling and walking provision has been made in Ghent particularly in the City Centre zone

2.3 Implications for Transport in Stellenbosch Municipality

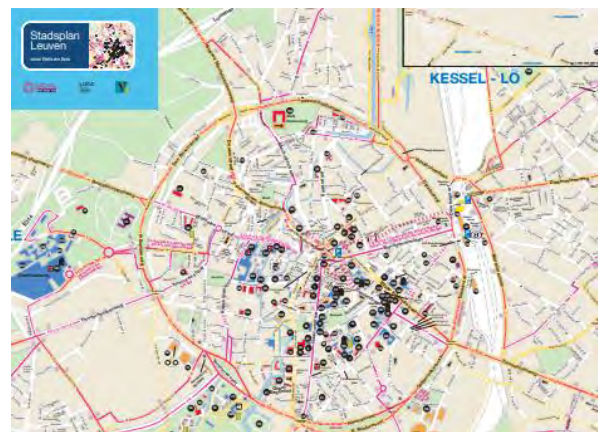
Typically all case study towns reviewed in the section above showed the following common transport components in common:

- Strong regional road network
- Good regional rail access
- Strong local public transport
- Strong walking and cycling access

In comparison these transport components are constrained or limited for the town of Stellenbosch and would require strengthening or improvements in order to support future sustainable growth. These should be the focus of the future transport planning for Stellenbosch.



Heidelberg – Good regional rail access



Leuven – Strong regional road networks



Pisa – Strong walking and cycling



Bath – Good local public transport

3 TRANSPORT REGISTER

3.1 Demographics and Socio Economic

Understanding the demand for travel in SM is critical to the planning of transport, including transport infrastructure and public transport services for the area and thus central to preparing this CITP. Transportation Demand refers to the amount and type of travel people would choose under specific conditions and taking into account factors such as:

- Land Use Patterns and demographics including spatial structure which drives where people live and work, land use mix and housing or population density.
- Economic development such as income levels, levels of employment and the number of tourists.
- Transport Options (private vehicles, public transport, cycling and walking) and proximity to services
- Quality (comfort, reliability, safety, security and cost of services)

3.2 Population and Project Growth

In 2020, Stellenbosch municipal area had an estimated population of 192879 ⁷ and after four years this population is estimated to be 209849. This equates to an estimated growth rate in this time span of 9.0% or 1.8% per annum. The estimated population growth rate of Stellenbosch is therefore 2.0 percentage points higher than the estimated population growth of the Cape Winelands which is 7% over the same period or 1.3% per annum.

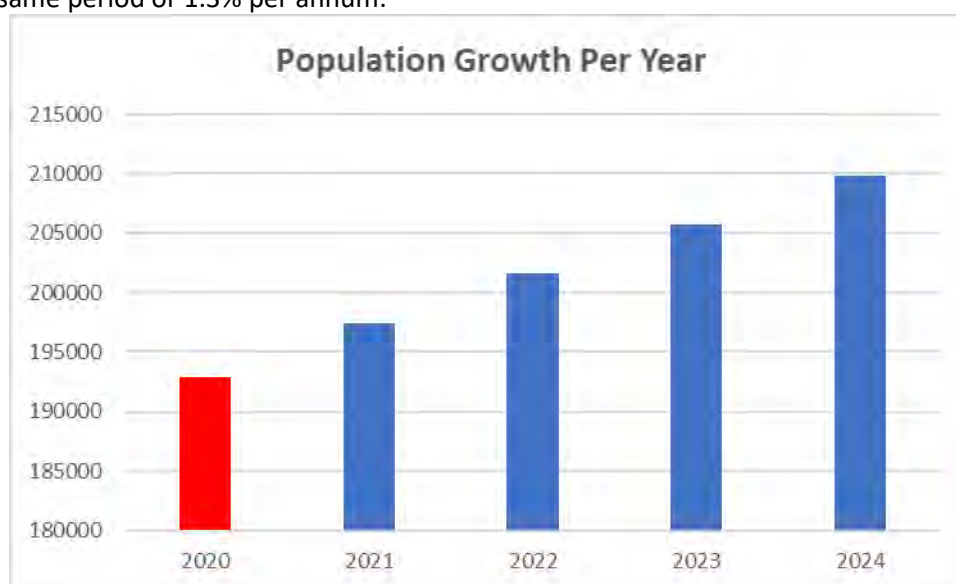


Figure 3.1: Population Growth in Stellenbosch Municipality

⁷ Stellenbosch Socio Economic Profile sourced from 2020 MERO

Figure 3.2 the current age composition of Stellenbosch population. The total population is broken down into four different groups: Age 0 - 14: children; Age 15 – 34 and 35-64: working age population; Age 65+: seniors. In Stellenbosch the highest percentages are for the age group 15-34 years followed by 35-64 years i.e. 41.9% and 30.3% respectively.

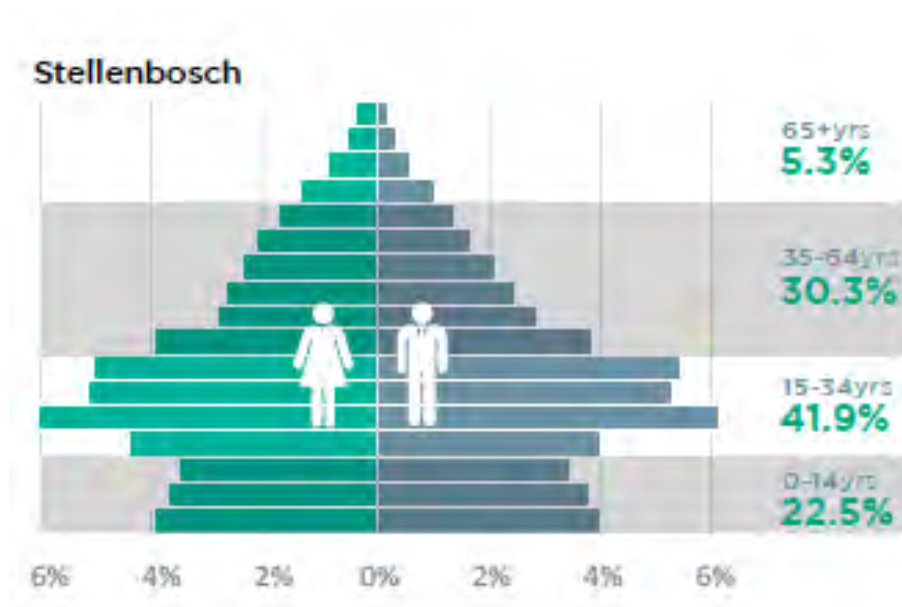


Figure 3.2: Age Breakdown of Stellenbosch Population

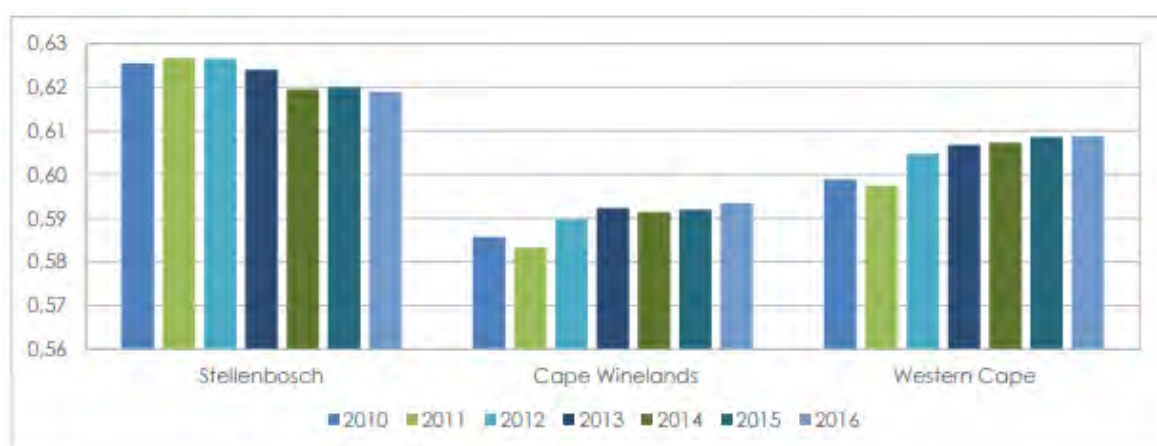
As per the latest 2020 Municipal Economic Review and Outlook Report, Stellenbosch municipal area comprises a higher share of females (51.2 per cent) than males (48.8 per cent). The municipal area has the largest share of people between the ages of 15 and 34 years (41.9 per cent) and this is proportionally higher compared with the CWD. The second largest share of the municipal area's population is between the ages of 35 and 64 years (30.3 per cent). This implies that approximately 72.2 per cent of the municipal area's population is still within the working-age population. Given that the Stellenbosch municipal area has the largest economic activity within the CWD, there are more people to actively participate in the economy. The municipal area has proportionally fewer children younger than 15 (22.5 per cent), as well as people older than 65 years (5.3 per cent), compared with the CWD.

3.3 Poverty and Income Levels

In general, South Africa has experienced deteriorating financial health under the weight of economic pressures, specifically between 2011 and 2015. Households and individuals in the Stellenbosch Municipal Area also mirror this poor financial health which can be seen in the increased levels of poverty and unemployment. The categories of people vulnerable to poverty remain African females, children 17 years and younger, people from rural areas, and those with no education. Inflation-adjusted poverty lines show that food poverty increased from R219 in 2006 to R531 per person per month in 2017. The lower-bound poverty line has increased from R370 in 2006 to R758 per person

per month in 2017 while the upper-bound poverty line has increased from R575 in 2006 to R1 138 per person per month in 2017.

The National Development Plan has set a target of reducing income inequality in South Africa from a Gini coefficient of 0.7 in 2010 to 0.6 by 2030. Income inequality has remained steady in Stellenbosch between 2010 and 2013 and dropped to 0.62 from 2014 to 2016. Income inequality levels were slightly higher in Stellenbosch than in the Cape Winelands District and the Western Cape.



Source: Global Insight, 2017

Figure 3.3: Income Inequality Levels for Stellenbosch compared to CWDM and Western Cape

The objective of the indigent policies of municipalities is to alleviate poverty in economically disadvantaged communities. The Stellenbosch municipal area experienced an increase in the number of indigents between 2014 and 2016, implying an increased demand for indigent support and additional burden on municipal financial resources. Similarly, the number of indigent households has increased in the Cape Winelands District as well as the Western Cape.

Table 3.1: The Number of Indigents for Stellenbosch, CWDM and Western Cape

Area	2014	2015	2016
Stellenbosch	5 336	6 030	6 626
Cape Winelands District	33 406	34 704	42 756
Western Cape	404 413	505 585	516 321

Source: Department of Local Government, 2017

3.4 Economic Sector Growth and Employment

The Stellenbosch Municipal area has the second largest local economy within the CWD with a GDP of R13.5 billion (2015). This Municipal area has a well-developed tertiary sector; however, the manufacturing sector also contributes significantly to the local economy. The wholesale and retail trade, catering and accommodation sector, the finance, insurance, real estate and business services sector and the manufacturing sector collectively contributed R8.0 billion (58.8 per cent) to the

economy of the Stellenbosch Municipal area in 2015, making these sectors the economic drivers within the area.

The average annual growth rate between 2005 and 2015 for Stellenbosch was 2.8 per cent; which is slightly lower than the average annual growth rate for CWD. The sectors achieving above average growth over a ten-year period is the construction sector, the finance, insurance, real estate and business services as well as the transport, storage and communication sector, showing continued investment in these sectors.

The economy of the Stellenbosch Municipal area has not fully recovered after the recession, with the five-year average growth rates lower than the 10-year average growth rates. Since 2011, growth dwindled year-on-year to reach 0.5 per cent in 2016, the lowest experienced by the local economy since the recession when the economy contracted by 2.9 per cent. The sectors contributing to the decline in growth for the 2016 period are mainly the primary and secondary sectors (excluding the construction sector). This indicates that even though the agriculture sector contributes less to the overall economy in terms of GDP, it is still a valuable local sector.

The sectors that contribute the most to the 75 425 jobs within the Stellenbosch Municipal area are the wholesale and retail trade, catering and accommodation sector (26.6 per cent), the finance, insurance, real estate and business services sector (15.3 per cent), the community, social and personal services sector (13.0 per cent) and the agriculture, forestry and fishing sector (12.4 per cent).

Overall, the Stellenbosch Municipal area had a significant positive net change in employment after the recession. Job creation in this local economy is, however, slowing down, with significantly fewer jobs being created in 2016 when compared to 2015. The agriculture, forestry and fishing, the manufacturing and the transport, storage and communication sectors jointly shed 528 jobs in 2016, highlighting the linkages between these sectors.

Table 3.2: Stellenbosch GDP Performance per Sector, 2005 - 2016

Sector	Contribution to GDP (2015)	R million value 2015	Trend		Real GDP growth (%)					
			2005 - 2015	2010 - 2015	2011	2012	2013	2014	2015	2016e
Primary Sector	5.7	768.8	1.4	1.0	-0.4	0.5	1.6	6.8	-3.5	-9.2
Agriculture, forestry and fishing	5.5	747.0	1.4	1.0	-0.5	0.5	1.6	6.8	-3.6	-9.3
Mining and quarrying	0.2	21.8	0.7	3.3	3.0	1.5	3.4	7.2	1.2	-5.9
Secondary Sector	24.1	3 258.8	0.5	0.4	0.3	1.4	0.0	0.1	0.1	-0.8
Manufacturing	17.0	2 303.3	-0.6	-0.5	0.3	0.4	-1.5	-0.9	-0.6	-1.2
Electricity, gas and water	1.4	192.1	0.8	0.8	3.2	1.6	0.7	0.0	-1.5	-3.4
Construction	5.6	763.3	6.5	4.1	-0.3	6.0	6.8	4.4	3.6	1.1
Tertiary Sector	70.3	9 520.9	3.9	3.5	4.6	3.8	3.4	2.9	2.5	1.8
Wholesale and retail trade, catering and accommodation	20.2	2 736.0	4.2	4.1	5.5	5.2	3.7	3.2	3.1	2.2
Transport, storage and communication	11.0	1 497.1	5.9	5.0	6.5	5.0	5.3	5.4	2.9	2.6
Finance, insurance, real estate and business services	21.6	2 925.4	4.3	3.3	4.0	3.3	3.0	2.6	3.8	2.3
General government	10.6	1 441.1	2.6	2.4	4.8	2.3	3.4	1.9	-0.2	0.4
Community, social and personal services	6.8	921.2	1.7	1.5	2.3	2.5	1.8	1.0	0.1	0.2
Total Stellenbosch	100	13 548.4	2.8	2.6	3.2	3.0	2.5	2.5	1.6	0.5

Source: Quantec Research, 2017 (e denotes estimate)

Unemployment has been steadily rising in the Stellenbosch Municipal area over the last decade, with an unemployment rate of 11.3 per cent recorded in 2015. In 2016, the unemployment rate of the Stellenbosch Municipal area is estimated to have increased to 11.9 per cent, which is marginally higher than that of the Cape Winelands District (11.6 per cent) but significantly lower than that of the Province (18.7 per cent in 2016).

Table 3.3: Stellenbosch Employment Growth per Sector 2005-2015

Sector	Contribution to employment (%) 2015	Number of jobs 2015	Trend		Employment (net change)					
			2005 - 2015	2010 - 2015	2011	2012	2013	2014	2015	2016e
Primary Sector	12.4	9 389	-2 956	1 940	-324	468	384	-503	1 915	-134
Agriculture, forestry and fishing	12.4	9 363	-2 947	1 947	-324	467	393	-503	1 914	-136
Mining and quarrying	0.0	26	-9	-7	-	1	-9	-	1	2
Secondary Sector	17.0	12 858	77	611	104	-126	363	29	241	22
Manufacturing	10.4	7 854	-1 243	-416	-62	-350	224	-272	44	-159
Electricity, gas and water	0.2	141	48	27	7	6	2	4	8	5
Construction	6.4	4 863	1 272	1 000	159	218	137	297	189	176
Tertiary Sector	70.5	53 178	17 135	9 177	1 494	1 635	2 178	1 851	2 019	360
Wholesale and retail trade, catering and accommodation	26.6	20 030	6 762	3 539	694	767	622	667	789	204
Transport, storage and communication	5.7	4 281	2 286	1 205	122	274	334	71	404	-233
Finance, insurance, real estate and business services	15.3	11 504	3 229	1 723	286	226	380	254	577	206
General government	10.0	7 564	1 815	712	305	116	91	406	-206	130
Community, social and personal services	13.0	9 799	3 043	1 998	87	252	751	453	455	53
Total Stellenbosch	100	75 425	14 256	11 728	1 274	1 977	2 925	1 377	4 175	248

Source: Quantec Research, 2017 (e denotes estimate)

Area	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016e
Stellenbosch	9.9	9.4	9.6	9.4	9.9	10.1	10.4	10.8	10.6	11.0	11.3	11.9
Cape Winelands District	9.6	9.0	9.2	9.2	9.8	9.8	10.1	10.7	10.6	10.9	11.2	11.6
Western Cape	16.5	15.8	15.7	15.3	15.8	16.1	16.4	17.0	16.7	17.2	17.8	18.7

Source: Quantec Research, 2017 (e denotes estimate)

3.5 Description of The Regular Daily Public Transport System

3.6 Minibus Taxis

The MBT is the dominant public transport mode in SM primarily due to its flexibility and ability to adapt to different passenger demands between towns, neighbourhoods and more rural farm areas. MBTs provide unscheduled public transport services where vehicles can be hailed or asked to stop to allow passengers to exit at any point on their route. The majority of MBT vehicles do not display their routing, origin or destination, while none advertise their fare structures. Fare collection takes place inside the vehicle and payment is only accepted in cash. The type of vehicle that is used depends on the passenger demand as well as the operating conditions.

MBTs have seating capacities ranging from 12 to 16 passengers. These vehicles are used in urban areas and on paved roads or gravel roads that are generally in a good condition.

Passenger cars used as MBTs come in a range of shapes, sizes, ages and conditions. There are some places where passenger cars are used where demand is low, when the operator cannot afford an approved vehicle or by private drivers carrying passengers for reward illegally. Passenger cars are also rented out by operators, for instance to a person needing to transport a large load that cannot be transported by MBT, or for occasional trips to destinations not served by public transport.

There are a number of MBT services in Stellenbosch Municipality which operate from a few main hubs i.e. Stellenbosch, Kayamandi, Franschhoek and Klapmuts. The town of Stellenbosch is the key administrative hub for the municipality and most routes are either destined or originated from the main MBT facility called Bergzicht Rank which is located in the CBD area.

MBTs serve local residential neighbourhoods such as Kayamandi, Idasvalley, Cloetesville, Jamestown, etc. as well as to the town of Franschhoek and Pniel. There is a strong functional relationship with the City of Cape Town, Drakenstein and Breede Valley Municipalities with a number of inter-municipal routes serving destination daily. Long distance services are also provided to Eastern Cape destinations and other locations outside of the Western Cape Province.

The table below summarises the number of ranks per town as well as the key origins and destinations served either locally, inter-town or inter-municipally.

Table 3.4: MBT Facilities and Main Route Destinations per Town

Town	Ranks	Local	Inter-town	Inter-Municipal	Long Distance
Stellenbosch	4	Kayamandi, Idasvalley, Cloetesville, Jamestown, Koelenhof, Vlottenburg, Lynedoch, Devon Valley, Jonkershoek, Elsenburg,	Franschhoek, Klapmuts, Pniel	Paarl, Cape Town, Kuilsriver, Khayelitsha, Delft, Eersteriver, Mfuleni Somerset West, Worcester, Robertson, Ashton,	Idutywa, Lusikisiki, Willowvale, Cala, Butterworth, Sterkspruit, Mount Fletcher, Umtata, East London, Port

Town	Ranks	Local	Inter-town	Inter-Municipal	Long Distance
				Montagu, Hermanus	Elizabeth, George, Matatiele, Bizzana, Keiskamahoe, Johannesburg, St Marks
Franschhoek	1	Local feed and distribute, Franschhoek farms	Stellenbosch, Pniel Klapmuts	Paarl, Paarl Mall	
Klapmuts	2	Local feed and distribute; Simondium, Muldersvlei, Elsenburg	Stellenbosch	Paarl, Dandarach Farms	
Pniel	0	Kylemore, Lanquedoch	Franschhoek, Stellenbosch		

The MBT's are organised into 3 active taxi associations (TAs) within SM. These include:

Table 3.5: Summary of Taxi Associations Ranks and Areas Served

#	Taxi Associations	Areas Served
1.	Stellenbosch Taxi Association	Stellenbosch neighbourhoods around town of Stellenbosch e.g. Cloeteville, Idasvalley, Jonkershoek, Jamestown, etc.
2.	Franschhoek Taxi Association	Farm and residential areas around Franschhoek, Klapmuts, Paarl, Stellenbosch
3.	Kayamandi Taxi Association	CDB town of Stellenbosch, some intermunicipal services in Cape Town and long distance to Eastern Cape

Based on inputs from MBT operators at consultation sessions, 7 MBT ranks were identified within Stellenbosch Municipality. Refer to Table 3.6 and Figure 3.5 for the list and location of these MBT ranks. Figure 3.5 shows the location of ranks at a municipal scale. There are only three formal rank facilities which include Bergzicht Rank located in Stellenbosch CBD, Kayamandi Rank located in one of the developing neighbourhoods Kayamandi north of the CBD and west of the R44 and Klapmuts Rank in the Klapmuts neighbourhood. The other four ranks are informal and utilise existing parking lots or open space for ranking purposes. These include Stellenbosch Station and Du Toit which largely serve inter-municipal or long distance destinations and Franschhoek and Klapmuts. These informal facilities have limited or no ablutions, embayments, parking or other infrastructure provided.

An observational facility audit survey was undertaken and the results are listed in Table 3.7, which indicates some of these features, namely:

- status – to identify whether facility is formal or informal;
- on/off street - to identify the location of the facility in relation to the roadway; and
- Paving – to distinguish the type of surface.

Table 3.6: List of MBT Ranks in Stellenbosch Municipality

No.	Town	Facility Name	Facility Type	Location	Services Offered*
1.	Stellenbosch	Bergzicht	Formal	Bird Street	C, IM
2.	Stellenbosch	Kayamandi	Formal	Masithandane Road	C, IM, LD
3.	Stellenbosch	Du Toit	Informal	R304 (Bird Street)	IM, LD
4.	Stellenbosch	Stellenbosch Station	Informal	Parking Opposite Station along Adam Tas	IM
5.	Franschhoek	Franschhoek	Informal	Pick n Pay on Main Road	C, IM, LD
6.	Klapmuts	Klapmuts Winelands Centre	Informal	New Shopping Centre/Klapmuts Station	C, IM
7.	Klapmuts	Klapmuts	Formal	c/o Groenfontein Rd & Bell St Facility	C, IM

Note *:

C – Commuter Services; IM – Inter-Municipal Services, LD – Long Distance Services

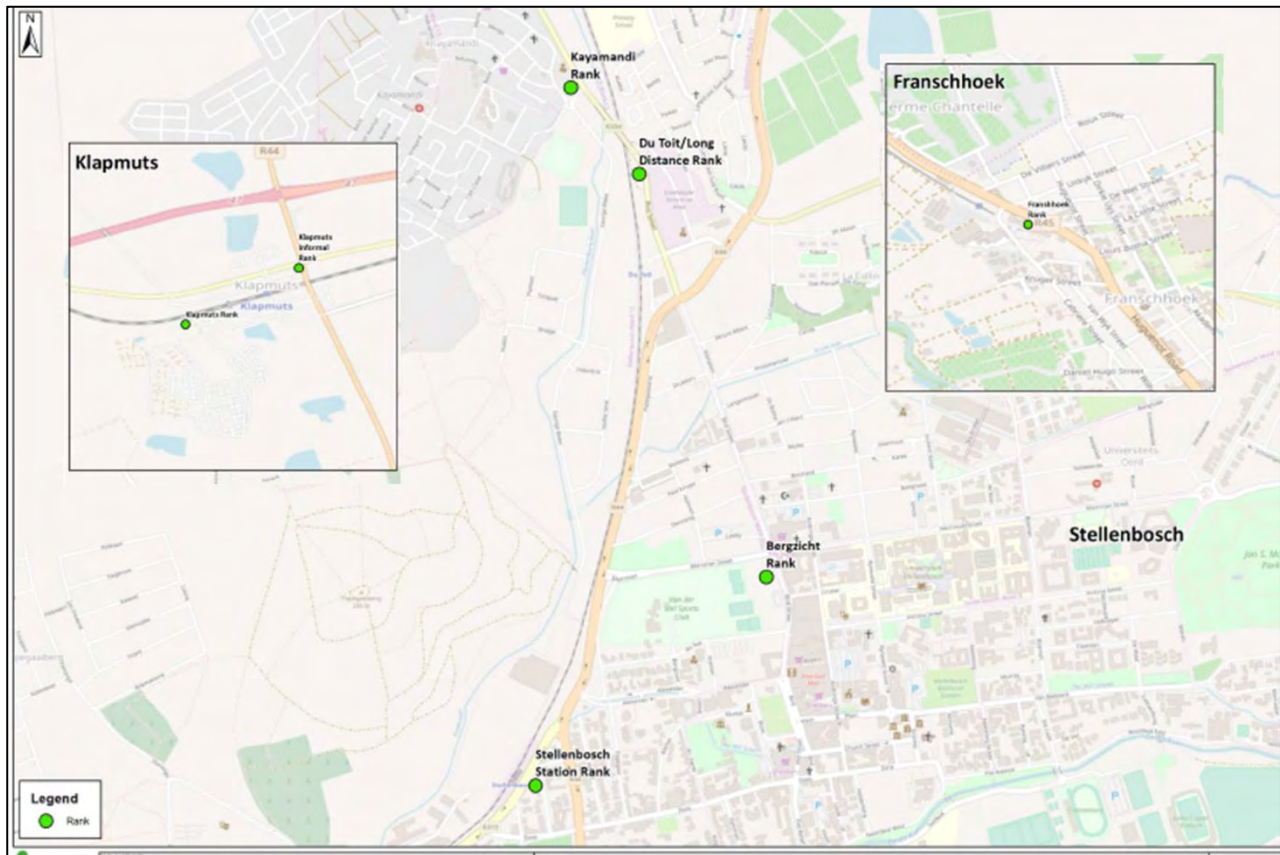


Figure 3.4: Map 1 of MBT Ranks located in Stellenbosch Municipality

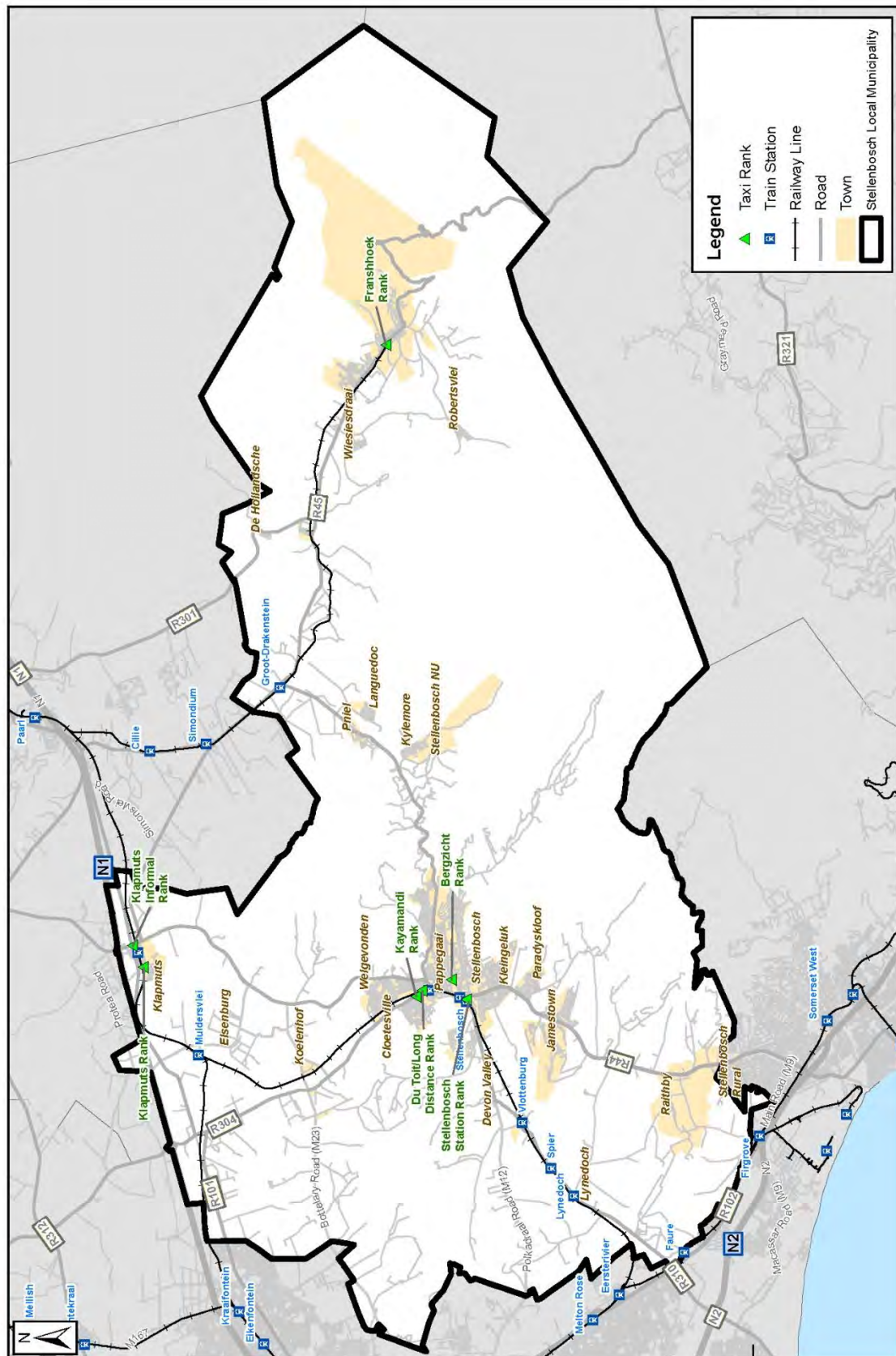


Figure 3.5: Map 2 of MBT Ranks located in Stellenbosch Municipality (municipal scale)

Table 3.7: Strategic Audit of All MBT Facilities in Stellenbosch

Facility Name	Status		Facility Type				On/Off Street	Paving (Y/N)	Electricity (Y/N)	Roof Structures (Y/N)	Public Telephones (Y/N)	Ablution facilities (Y/N)	Offices (Y/N)
	Formal	Informal	Terminus for Buses	Rank for minibus Taxis	Rail Station	Holding area							
Bergzicht	x		Yes	Yes	No	Yes	Off	Yes	Yes	Yes	Yes	Yes	Yes
Kayamandi	x		No	Yes	No	Yes	Off	Yes	Yes	No	No	No	No
Du Toit		x	No	Yes	No	Yes	Off	No	No	No	No	No	No
Stellenbosch Station		x	No	Yes	Yes	Yes	Off	Yes	No	No	Yes*	Yes*	No
Franschhoek		x	No	Yes	No	Yes	On	Yes	No	No	No	No	No
Klapmuts Winelands Centre		x	No	Yes	No	Yes	Off	Yes	No	No	No	Yes	Yes
Klapmuts	x		No	Yes	No	Yes	On	Yes	No	No	No	No	No

Note*:

Use of the ablution and telephone facilities available at the rail station, but not at the informal rank

Further analysis of this current MBT route list for Stellenbosch Municipality was found to be extremely problematic for a number of reasons including:

- Inaccurate and lack of correlation or consistency between all database sources i.e. PRE database, taxi associations and municipality making it difficult to verify the actual number of routes
- Routes were established more than 20 years ago; they are therefore no longer relevant with new or changing land use
- Road network and other infrastructure changes (consolidation of ranks) have occurred making route descriptions no longer valid
- No correlation or accuracy of the number of OLs
- Not accurate vehicle registration numbers or owner information
- No maps of routes make it difficult to confirm actual route alignments
- There are duplicate or multiple route numbers between the same origin and destinations (O-D) pairs

It was decided that the best way forward was to prepare a revised list of routes for Stellenbosch. This exercise was focused on the local routes. The following principles were followed:

- Multiple route numbers for the same O-D pair were consolidated into one route number
- Where there were minor route variations or “vias” between the same O-D pair these were included in the one route number with a few road link options
- Where the B destination was a neighbourhood without a rank the route was modified to allow collection and feeding within the boundaries of the neighbourhood
- Route numbers that were no longer viable due to a shift in rank location or lack of demand were deleted.
- The final consolidated route description took into account all route variations between O-Ds as well as the actual routes recorded as part of the onboard surveys.

Table 3.8 summarises the proposed routing changes for local routes. These changes were made based on the above principles. This revision allowed for a consolidation of routes between the same O-D. A total of 16 local routes which serve the following local neighbourhood destinations and towns within the municipal area.

- Between Stellenbosch and Kayamandi, Idasvalley, Cloetesville, Jamestown, Koelenhof, Vlottenburg, Lynedoch Station, Devon Valley, Elsenberg, Jonkershoek and the R310
- Between Stellenbosch and Klapmuts, Pniel, Kylemore, Lanquedoc, Franschhoek
- Between Franschhoek and surrounding residential areas and farms
- Between Klapmuts and surround residential areas, Simondium and Muldersvlei and Elsenburg

Table 3.8: Revised Local Routes for Stellenbosch Municipality

TA	New #	Route Name	Consolidate Route #s	Route Numbers Removed
Stellenbosch 9 routes	656	Stellenbosch - Idasvalley	656, 657, 658, 659, 660, 661,	630, 631, 632, 633, 634, 635, 705, 706, 707, 916, 917, 942
	665	Stellenbosch - Cloeteville	665	636, 637, 666, 702, 703, 704
	670	Stellenbosch - Jamestown	670,671	638, 639, 782, 783
	662	Stellenbosch - Koelenhof	662	
	663	Stellenbosch - Vloottenburg/ Lynedoch Station/Devon Valley	663, 664, 672	
	667	Stellenbosch - Kylemore/ Pniel/ Lanquedoc	902, 903, 667, 668,754	
	675	Stellenbosch - Jonkershoek	675	
	673	Stellenbosch-Elsenburg	673a, 673b, 674a, 674b, A63	
	Y48	Stellenbosch-R310	Y48, Y49, Y50	
Franschhoek 5 routes	A96	Franschhoek - Franschhoek Plase		
	G60	Klapmuts- Stellenbosch via Muldersvlei	G58, G60	
	G61	Klapmuts - Simondium		
	M59	Klapmuts - Klapmuts		
	Z47	Franschhoek - Stellenbosch		
Kayamandi 1 route	676	Stellenbosch - Kayamandi	676, 677, 722, 723, 813, 814, 815	

Table 3.9: Revised Inter-Municipal Routes for Stellenbosch Municipality

TA	New #	Route Name	Consolidate Route #s	Route Numbers Removed
Stellenbosch 2 routes	669	Stellenbosch – Somerset West	669, 741, T43	
	A88	Stellenbosch - Kuilsrivier		
Franschhoek 4 routes	755	Franschhoek - Paarl	755, 873	
	G15	Klapmuts - Paarl	G15, G57	
	G59	Klapmuts-Dandarach Farms Paarl		
	N42	Franschhoek - Paarl Mall		
Kayamandi 2 routes	N12	Stellenbosch (DuToit) –Bellville (long distance rank)		
	Q80	Kayamandi-Lwandile		

Table 3.9 summarises the route changes for the inter-municipal routes. No modifications were made to the long distance routes. There are now 8 inter-municipal routes provide services to the following areas:

- Stellenbosch to Somerset West, Kuilsriver, Bellville
- Franschhoek to Paarl and Paarl Mall
- Klapmuts to Paarl and Dandarch Farms
- Kayamandi to Lwandile

MBT routes have an origin- destination (which may or may not be a rank) as well as a route description which summarises which route authorities an operator has. An operator, as part of a particular taxi association, applies to the PRE for a particular route which are assigned to a respective route number.

Annexure A shows the actual route descriptions which were revised as well as the associated conditions for the local and inter-municipal routes respectively. Maps of each of the revised routes have also been prepared. See Annexure B.

Routes serve various areas in SM in the form of a commuter services as well inter-municipally to City adjacent municipalities (Cape Town and Drakenstein) as well as to other longer distance destinations in other provinces. Table 3.10 summarises destinations from the ranks in SM.

Table 3.10: Routes Serving the Various Ranks in Stellenbosch Municipality

No.	Facility Name	Destinations Local / Commuter (C); Inter-Municipal (IM); Long Distance (LD)	Route Nos per Rank
1.	Bergzicht	C: Idasvalley, Cloetesville, Jamestown, Koelenhof, Vlottenburg/ Lynedoch Station/Devon Valley, Kylemore/ Pniel/ Lanquedoc, Jonkershoek, Elsenburg, Kayamandi IM: Somerset West,	656, 665, 670, 662, 663, 667, 675, 673, Y48, 676
2.	Kayamandi	Stellenbosch CBD	676
3.	Du Toit	IM: Lwandile, Bellville LD: Eastern Cape destinations	N12, Q80
4.	Stellenbosch Station	IM: Somerset West, Kuilsrivier	669, A88
5.	Franschhoek	C: Franschhoek Plase, Stellenbosch IM: Paarl, Paarl Mall	A96, , Z47
6.	Klapmuts Winelands Centre	C: Stellenbosch via Muldersvlei, Simondium, Klapmuts IM: Dandarach Farms (Paarl)	G60, G61, M59
7.	Klapmuts	C: Stellenbosch via Muldersvlei, Simondium, Klapmuts IM: Dandarach Farms (Paarl)	G60, G61, M59

Table 3.11 shows the passenger departure volumes per rank for weekday, Friday, Saturday and the All Pay Day. It should be noted that these volumes are considered to be an under-representation of actual passenger volumes. This is because not all vehicles pass through a rank. Particularly during peak periods which is when rank surveys were undertaken, most routes from Stellenbosch neighbourhoods to the CBD passengers are dropped directly at desired destinations in town. From the rank surveys the following can be observed:

- Bergzicht Rank has the largest number departures (42-55% of the total passenger departures); all pay day is the busiest day followed by a Friday with passenger departures ranging from 2900 – 4700 daily pax.
- Kayamandi Rank is the next busiest (19 – 24% of total passenger departures); All pay day also the busiest followed by weekday with approximately 1400 – 2000 daily pax.
- Stellenbosch and Klapmuts Ranks have the lowest number of departure activity around 400 – 700 daily pax
- Du Toit informal rank has approximately 900 – 1100 daily pax
- Stellenbosch Station informal rank has approx 200 – 1000 daily pax
- Outside of All Pay Day, Friday is the busiest day for most ranks in Stellenbosch Municipal area.

Table 3.11: Passenger Departures for Weekday, Friday, Saturday and All Pay⁸

No.	Rank	WDay	%	Fri	%	Sat	%	All Pay	%	Total	%
1	Bergzicht	3658	42%	4599	47%	2988	44%	4726	55%	15972	47%
2	Kayamandi	1835	21%	1842	19%	1417	21%	2023	24%	7118	21%
3	Du Toit Station	1023	12%	1140	12%	967	14%	1116	13%	4246	13%
4	Stellenbosch Station	1058	12%	1141	12%	212	3%			2411	7%
5	Franschhoek	590	7%	562	6%	617	9%			1769	5%
6	Klapmuts WC			103	1%					103	
7	Klapmuts	481	6%	373	4%	596	9%	671	8%	2121	6%
	Total	8645		9760		6797		8536		33741	

Notes:

Passenger volumes only for 5 hours over AM and PM peak periods

Table 3.12 shows the passenger arrival volumes per rank for weekday, Friday, Saturday and the All Pay Day. Arrival volumes are also significantly under-counted since most passengers are dropped enroute prior to rank arrival. From the rank surveys the following can be observed:

- Bergzicht Rank has the largest number of arriving passengers (41-79% of the total passenger arrivals); Saturday arrivals are highest approximately 333 pax were observed followed by Fridays 228 pax
- Kayamandi arrivals were next highest with weekday arrivals the highest approximately 114 pax.

⁸ March 2019 Ranks Survey

- Franschhoek had the next highest arrivals also on a weekday i.e. around 90 pax.

Table 3.12: Passenger Arrivals for Weekday, Friday, Saturday and All Pay^{9*}

No.	Rank	WDay	%	Fri	%	Sat	%	All Pay	%	Total	%
1	Bergzicht	154	41%	228	55%	333	79%	100	50%	815	58%
2	Kayamandi	114	30%	74	18%	82	19%	83	41%	353	25%
3	Du Toit	8	2%	3	1%	5	1%	1		17	1%
4	Stellenbosch Station			11	3%	2				13	1%
5	Franschhoek	90	24%	87	21%		0%			177	13%
6	Klapmuts WC			6	1%					6	0.4%
7	Klapmuts	10	3%	8	2%			17	8%	35	2%
	Total	376		417		422		201		1416	

Notes:

Passenger volumes only for 5 hours over AM and PM peak periods

There was a high number of no activity observed particularly during peaks:

Departures

- Bergzicht: Weekday and Friday AM Peak;
- Du Toit Rank: Saturday all day
- Kayamandi: Friday PM peak
- Klapmuts: Weekday AM and PM peak; Friday and All Pay PM peak
- Klapmuts: Winelands Centre: Friday and All Pay AM Peak
- Stellenbosch Station: Weekday and Friday AM Peak;

Arrivals

- Bergzicht: Weekday and Friday AM peak,
- Kayamandi: Friday PM peak
- Klapmuts: Weekday AM and PM peak, Friday/All Pay day PM peak,
- Klapmuts Winelands Centre: Friday and All Pay Day AM Peak
- Stellenbosch Station: Weekday and Friday AM peak

This is a serious concern for utilising the rank surveys only as a form of evaluating demand for OLs. It is recommended that these volumes be adjusted with inputs from the taxi operators, traffic and municipal officials as well as the cordon counts.

Table 3.13 summarises the distances per route. It also summarises the average 1-way route distance for all routes serving a particular rank as well as the average speed and estimated turnaround time for these group of routes.

⁹ Source: March 2019 Ranks Survey

Table 3.13: Distance and Average Travel Time per Route (local)

TA	New #	Route Name	Average 1-way Route distance [km]	Avg. Speed	Turn-around Time [hh:mm]
Stellenbosch	656	Stellenbosch - Idasvalley	5.9	28	00:21
	665	Stellenbosch - Cloetesville	10.5	38	00:27
	670	Stellenbosch - Jamestown	8.5	31	00:27
	662	Stellenbosch - Koelenhof	24.0	62	00:39
	663	Stellenbosch - Vlottenburg/ Lynedoch Station/Devon Valley	10.9	78	00:14
	667	Stellenbosch - Kylemore/ Pniel/ Lanquedoc	16.5	57	00:29
	675	Stellenbosch - Jonkershoek	3.0	25	00:12
	673	Stellenbosch-Elsenburg	16.9	41	00:41
	Y48	Stellenbosch-R310	18.0	95	00:19
Franschhoek	A96	Franschhoek - Franschhoek Plase	No data		
	G60	Klapmuts- Muldersvlei- Stellenbosch	8.8	52	00:17
	G61	Klapmuts - Simondium	22.6	42	00:54
	Z47	Franschhoek - Stellenbosch	8.9	40	00:22
Kayamandi	676	Stellenbosch - Kayamandi	22.6	42	00:54

Table 3.14: Distance and Average Travel Time per Route (Inter-municipal)

TA	New #	Route Name	Average 1-way Route distance [km]	Avg. Speed	Turn-around Time [hh:mm]
Stellenbosch	669	Stellenbosch – Somerset West	20.5	59	00:35
	A88	Stellenbosch - Kuilsrivier	No data		
Franschhoek	755	Franschhoek - Paarl	36.3	61	01:00
	G15	Klapmuts - Paarl	17.4	56	00:31
	G59	Klapmuts-Dandarach Farms Paarl	Na data		
	N42	Franschhoek - Paarl Mall	34.2	70	00:49
Kayamandi	N12	Stellenbosch (DuToit) –Bellville (long distance rank)	25.6	64	00:40
	Q80	Kayamandi-Lwandile	26.3	53	00:50

Passenger waiting times usually serves as a measure or indicator for service quality. The average waiting time was recorded at the various ranks. It is based on the time a person enters the queue and when the vehicle departs. Table 3.15 summarises the average waiting time during peak periods at the

various ranks. Typically average wait time during peak hour ranges from 1 minutes to 54 minutes. The analysis shows that Bergzicht station has the longest wait time of 54 minutes. On average Klapmuts Winelands Centre has the highest waiting time of 25.50 minutes and Franschhoek Rank has the least waiting time of 4.72 minutes.

Table 3.15: Passenger and Vehicle Waiting Times- Peak Hour¹⁰

Rank Number	Rank Name	Average Wait Time During Peak Hour (minutes)
1	Bergzicht	14.34
2	Franschhoek Rank	4.72
3	Kayamandi	7.91
4	Du Toit	8.14
5	Klapmuts	14.10
6	Klapmuts Winelands Centre	25.50
7	Stellenbosch Station	10.95
8	Average Waiting Time	9.60

3.7 Commuter Bus

The bus route operated by Golden Arrow Bus Service (GABS) between Stellenbosch, Somerset West and Strand was cancelled due to low ridership.

Existing inter-municipal commuter bus services are in operation in the Stellenbosch Municipal area during the morning and afternoon peak periods. They are the following:

- Mitchell's Plan Town Centre to Stellenbosch via Luzuko
- Stellenbosch to Golden Acre

The University of Stellenbosch operates weekday shuttle services to and from various campus destinations to decentralised parking facilities. These services are mostly free of charge and is exclusively for the use of students and staff. Transports Tygerberg residence students who have made bookings between the campus collection point and a nearby shopping



¹⁰ source: 2019 Rank Surveys

centre, currently Tyger Valley (Mon - Wed) and Parow Centre (Thursday).

A campus shuttle service is also available on central campus. There is a day service (07:00 -17:30) and a booked evening service (18:00 – 02:00).

This service focuses on the following needs:

- Transport between the general parking areas on the edge of campus and central campus during the day.
- Transport to and from service divisions and departments on the edge of campus (e.g. Food Science and Welgevallen), to and from central campus.
- Transport of congress attendees to and from the general parking areas on the edge of campus.

3.8 Rail

The Western Cape has an extensive rail network providing linkages between various part of the Province as well as beyond the Province boundaries. The network has both passengers and freight movement. Refer to Figure 3.6 for a schematic route diagram of the Metrorail lines operated in the Western Cape.

The current operator of the passenger rail network is Metrorail, a member of PRASA, which provides a scheduled service. Metrorail currently provides a minimal passenger rail service to areas within the Stellenbosch Municipal area. The total length of railway line within the municipality is approximately 18 km. There are only seven railway stations which fall within the Stellenbosch Municipal area; namely:

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



The service to Stellenbosch comprises two trains per peak hour originating from the northern line through the Stellenbosch Municipal area. The Metrorail timetables for these services show 25 trains operating per day in each direction on a weekday (Monday to Friday), 15 trains on Saturday and 13 on a Sunday. Stations in Stellenbosch offer access via the northern line to stops within the City of Cape Town and Drakenstein Municipalities.

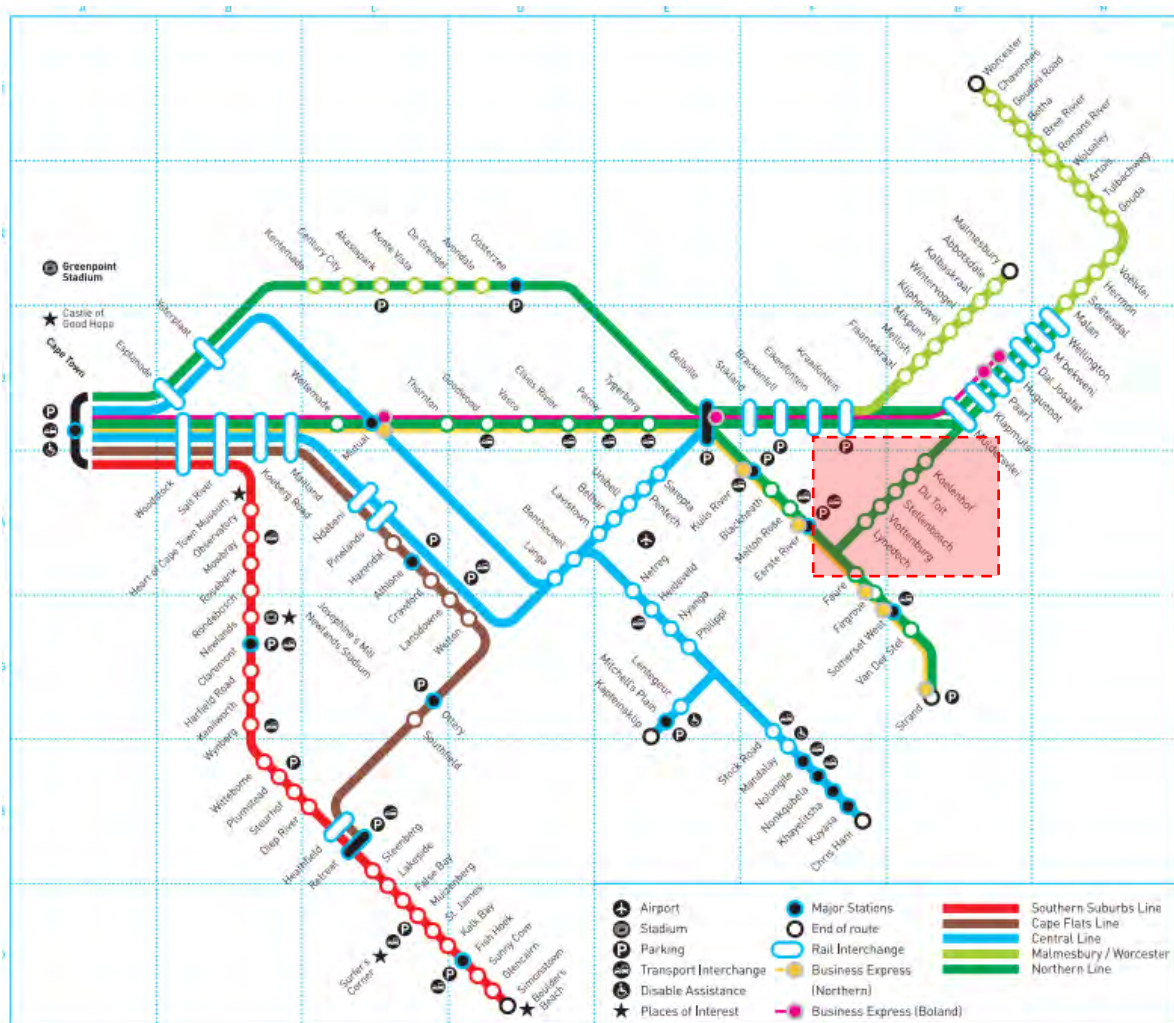


Figure 3.6: Map of Rail Lines in the Western Cape (Metrorail)

Table 3.16: Passenger Rail Fares¹¹

¹¹ Metrorail, 2015

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

The current fares for the rail stations within the Municipal area are shown in Table 3.17.

The tariffs for these services are based on the Km zone pricing for travelling distances between 136 km and 200 km. Therefore the ticket pricing (at January 2015) was R22.50 for a single ticket and R567 for a monthly ticket travelling in Metro Plus coaches and R17 for a single ticket and R344 for a monthly ticket travelling in Metro coaches. All the railway stations, with the exception of Lynedoch, fall within the 41 – 135 km zone with a fare rate range of between R12 (MetroPlus) for a single ticket and R471 (Metro) for a monthly ticket.

The 2007 and 2012 rail passenger census done by PRASA covered a number of stations in the Drakenstein area. Boarding and alighting passenger counts were obtained per train for a typical weekday which was either a Tuesday, Wednesday or Thursday.

Table 3.17 indicates the number of passengers boarding and alighting at the surveyed Stellenbosch Municipality stations during a weekday in 2007 and 2012. The most noticeable change is at the Klapmuts station, with a reduction of 13% between 2007 and 2012. Vlottenburg, Koelenhoff, Muldersvlei and Du Toit show small increase in passengers. However this data is quite dated and there is an understanding that there has been a significant decline in Rail usage over the past few years. This decline has been due to poor service and declining rolling stock and infrastructure. This modal shift has largely been to MBT. According to the 2012 rail census the passenger rail service lines of Muldersvlei to Cape Town via Stellenbosch and Woodstock and Worcester to Cape Town via Wellington and Monte Vista had 1 train set consisting of 4-metro Plus and 4-metro coaches (5M2A train type). The capacity of the train set is approximately 557 persons standing and 212 persons seated. The passenger capacity during the 06:00 – 07:00 peak hour is approximately 2 228 persons standing and 848 seated (i.e. a total of 3 076 persons in the peak hour in both directions). The service operates once in the morning peak hour.

Table 3.17: Rail Passenger Volumes In Stellenbosch Municipality¹²

¹² Rail Census 2007 and 2012

Comparision Between Rail Passengers Boarding And Alighting For 24 Hour Period (Both Directions)					
Station	Boarding		Alighting		% Difference 2007 to 2012
	2007	2012	2007	2012	
Klapmuts	1692	1468	1646	1426	-13.3%
Muldersvlei	3919	3713	3213	3722	4.2%
Koelenhof	651	686	576	614	5.9%
Du Toit	2808	2863	2589	2695	3.0%
Stellenbosch	2209	2471	2553	2286	-0.1%
Vlottenburg	448	482	505	544	7.7%
Lynedoch	653	624	793	811	-0.8%

3.9 Long-distance and Cross-Border Transport

There are three long distance commercial bus services that travel through Stellenbosch Municipality namely:

- Greyhound
- Translux
- Intercap

All these operators primarily travel on the national routes (N1, N2 and N3) between major cities such as Cape Town, Johannesburg, Pretoria, Port Elizabeth and Durban.

Greyhound operates between Cape Town, Johannesburg, Port Elizabeth and Durban via Bloemfontein. Translux operates between Cape Town, Durban, East London and Pretoria as shown in Figure 3.7.

The following destinations are available along these routes:

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

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

The Translux bus currently operates along four routes through Stellenbosch which depart from the Stellenbosch Station. See Figure 3.7 showing Translux destinations.

Intercap operates from Cape Town on routes throughout South Africa and to neighbouring countries as shown in Figure 3.8.



Figure 3.7: Translux Bus Route Map



Figure 3.8: Intercape Route Map

3.10 Non-Motorised Transport

NMT includes all forms of movement that do not rely on an engine or motor for movement. This includes but is not limited to, walking, cycling and animal-drawn vehicles and wheelchairs¹³. Walking and cycling are the more common forms of NMT usage in Stellenbosch and this is reflected in the municipal NMT Masterplan of 2020. People with ‘special categories of need’ also need to be considered¹⁴. Figure 3.9 schematically depicts the definition of NMT.

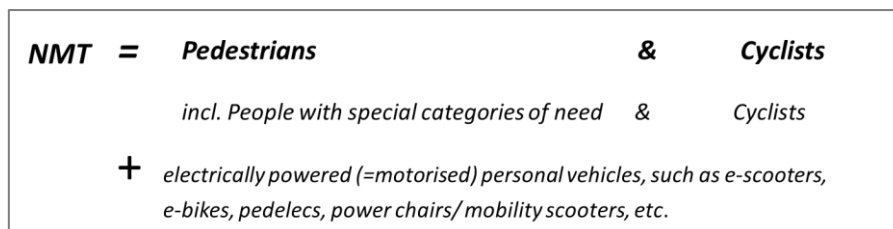


Figure 3.9: Definition of NMT

Stellenbosch is a town characterised by a walkable CBD, a very attractive environment, and relatively short travel distances between surrounding residential areas (Kayamandi, Cloetesville and Idasvalley). The location of the US within the CBD with students walking primarily between venues, also adds the demand for various forms of NMT within the town. Sidewalks make up 80% of the existing Non-Motorised Transport (NMT) infrastructure in SM. There are approximately 120km of sidewalks and 30km of cycle infrastructure. Of that, more than half is located in Stellenbosch town and surrounds. Refer to Figure 3.10 and Figure 3.11.

Table 3.18: Extent of NMT Network

	Whole Stellenbosch Municipality	Stellenbosch Town (incl. Khayamandi, Jamestown)
	Length (km)	Length (km)
Existing Sidewalk	119	76
Existing Cycle Class 1	2	1
Existing Cycle Class 2	22	9
Existing Cycle Class 3	5	5
Total (km)	148	91

Note:

1) Cycle Class 1 is located outside of the road reserve and shared by pedestrians and cyclists.

2) Cycle Class 2 is located within the road reserve but separated from the roadway by level difference/kerb. Within SM Class 2 facilities are shared by pedestrians and cyclists.

3) Cycle Class 3 is a bicycle lane that forms part of the street or the carriageway and is marked accordingly.

4) Cycle Class 3 refers to centreline length.

¹³ DoT, NMT Facility Guidelines, 2015.

¹⁴ National Land Transport Act, 2009.

The majority of NMT infrastructure investment has taken place in the town of Stellenbosch with limited facilities available in the suburbs located on the outskirts of the town (specifically in and around Khayamandi). The CBD is fairly pedestrian-friendly with wide sidewalks along most routes, but walking and cycling is not safe with the ever-increasing traffic and parking in the CBD and the old street infrastructure with no dropped kerbs are not suitable for people in wheelchairs, people using trolleys/prams, skateboarders and cyclists. Figure 3.12 highlights the lack of bicycle infrastructure.

Roughly 30% of all roads in the whole municipal area have sidewalks at least on one side of the road. The majority of bicycle infrastructure is provided as shared facilities with pedestrians (approximately 75% are Class 2 Facilities). In most cases however, the sidewalks and cycle facilities are too narrow for the observed NMT volumes and lack continuity (its condition and connectivity). Figure 3.10 indicates the reasonably well coverage of sidewalk infrastructure in Pniel and Kylemore but also highlights missing links. For example, the connection from the local settlements of Wemmershoek and La Motte to the main road (R45) needs to be provided.



Figure 3.10: Existing sidewalk infrastructure in Stellenbosch with cycle facilities (green)



Figure 3.11: Existing sidewalk facilities in Kylemore/Pniel/ Franschhoek and existing cycle facilities (green)

3.11 Health Transport Services

The provision of health transport services is a provincial function and provided by HealthNET (Health non-emergency Transport) provides for non-emergency patients between home and facilities, or between multiple facilities. Patients are booked using an online system that ensures that seats are allocated equitably and no patients can be overbooked. Bookings can only be made through the provincial health care facility (hospital/clinic) and patients receive a reference number and data of collection. There are 90 HealthNET vehicles operating in the Western Cape.

Table 3.19: List of Healthcare Facilities and Locations in Stellenbosch Municipality

No.	Healthcare Facility Name	Location/Address
1.	Aan-het-Pad Clinic	6851 Long Street, Cloetesville, 7600
2.	Cloetesville CDC	c/o Bell and Tennant Street, Cloetesville, 7600
3.	Devon Valley Mobile 1	Helshoogte Road, Idas Valley, 7600
4.	Dirkie Uys Street Satellite Clinic	Dirkie Uys Street, Franschoek, 7690
5.	Don and Pat Bilton Clinic	5 Pajora Way, Jamestown, 7600
6.	Franschhoek Mobile 1	Dirkie Uys Street, Franschoek, 7690
7.	Groendal Clinic	1 Stiebeuel Straat, Franschoek, 7690
8.	Groot Drakenstein Mobile 1	19 Skoolstraat, Kylemore, 7680
9.	Idas Valley Clinic	Helshoogte Road, Idas Valley, 7600
10.	Kayamandi Clinic	56 Bassi Street, Kayamandi, Stellenbosch, 7600
11.	Klapmuts Clinic	342 Merchant Street, Klapmuts, 7600
12.	Koelenhof Mobile 1	6852 Long Street, Cloetesville, 7600
13.	Kylemore Clinic	19 Skoolstraat, Kylemore, 7680
14.	Simondium Clinci	Watergat Road, Simondium, 7670
15.	Simondium Mobile Clinic	Watergat Road, Simondium, 7670
16.	Stellenbosch Hospital	80 Merriman Street, Stellenbosch, 7600

3.12 Institutional and Organisational Structure of Public Transport Industry

MBT are the main mode of public transport in Stellenbosch. MBTs are structured into taxi associations. There are 3 taxi associations that are active in SM which include:

1. Stellenbosch Taxi Association
2. Franschhoek Taxi Association
3. Kayamandi Taxi Association

There are also a few scheduled bus services in SM. These are operated by Golden Arrow Bus Services (GABS) in terms of an operating contract with the Western Cape Government.

The passenger rail service is operated by Metrorail a division of PRASA.

Although SM does not have direct control over these management entities, it is important for them to foster good relationships with transparent and regular liaison.

3.13 Roads and Traffic

Stellenbosch is strategically located within the Western Cape Region and operates closely with neighbouring municipalities particularly the Cities of Drakenstein and Cape Town. The Western Cape Provincial Government in their spatial planning has recognised the region as a functional area (see Spatial Development Framework section). This regional functioning relies on key higher order network of roads to support the demand for access between towns within the functioning region. Stellenbosch is strategically located within this functional area.

3.14 Major Network of Roads

Table 3.20 shows the kilometre extent of the road network in SM by functional class. SM contains a total of 312km road network. The highest are 160.1km (51%) of access and 52.9km (16.9%) of collector roads in Stellenbosch. Franschhoek (32.2 km) and Klapmuts (20.8 km) has the next largest extent of road network.

Table 3.20: Kilometers of SM Road Network by Functional Class

Town	Arterial	Distributor	Collector	Access	Total
Devonvale	0.0	0.0	0.0	7.8	7.8
Franschhoek	0.0	0.0	2.9	29.3	32.2
Klapmuts	0.0	0.0	0.0	20.8	20.8
Kylemore	0.0	0.0	0.7	6.0	6.7
La Motte	0.0	0.0	0.0	4.6	4.6
Lanquedoc	0.0	0.0	1.6	7.1	8.7
Meerlust	0.0	0.0	0.0	1.0	1.0
Pniel	0.0	0.0	0.0	10.6	10.6
Raithby	0.0	0.0	0.0	2.8	2.8
Stellenbosch	4.0	0.0	52.9	160.1	217.0
TOTAL	4.0	0.0	58.1	250.4	312.5

The road network of Stellenbosch Municipality is shown in Figure 3.12. The major roads include the R44, the R304 and the M12 and are the main north-south structuring connectors. Stellenbosch is located strategically within the regional road networks considered in the region. The R45-R43-R62 route provide connectivity between the Saldanha Industrial Development Zone and the N2 via Worcester and the R46-R62 also provides connectivity for movement to and from the northern areas of the Western Cape along the N7 towards the N2. These routes provide a connection between the N1 and the N2 across the CWDM area on the eastern side of the Drakenstein Mountain ranges.

The only other routes providing a connection between the N1 and the N2 on the western side of the Drakenstein Mountain would be the R300 within the municipal boundary of the City of Cape Town (COCT), as well as the R44, providing a connection between the N7 in Malmesbury, with the N1 and the N2. As there is a significant distance between the R45-R43-R62 route and the R300-route, also separated by the Drakenstein Mountain, the N7-R44 route is very desirable for travel west of the

Drakenstein Mountains. This R44 route continues through Stellenbosch and makes Stellenbosch a strategic nexus from a regional perspective.

These provide linkages to Paarl in the north and Somerset West/Khayelitsha in the south. The R310 also provides an internal east-west connection to Kylemore and Pniel. Franschhoek is connected to Paarl via the R45 and R301.

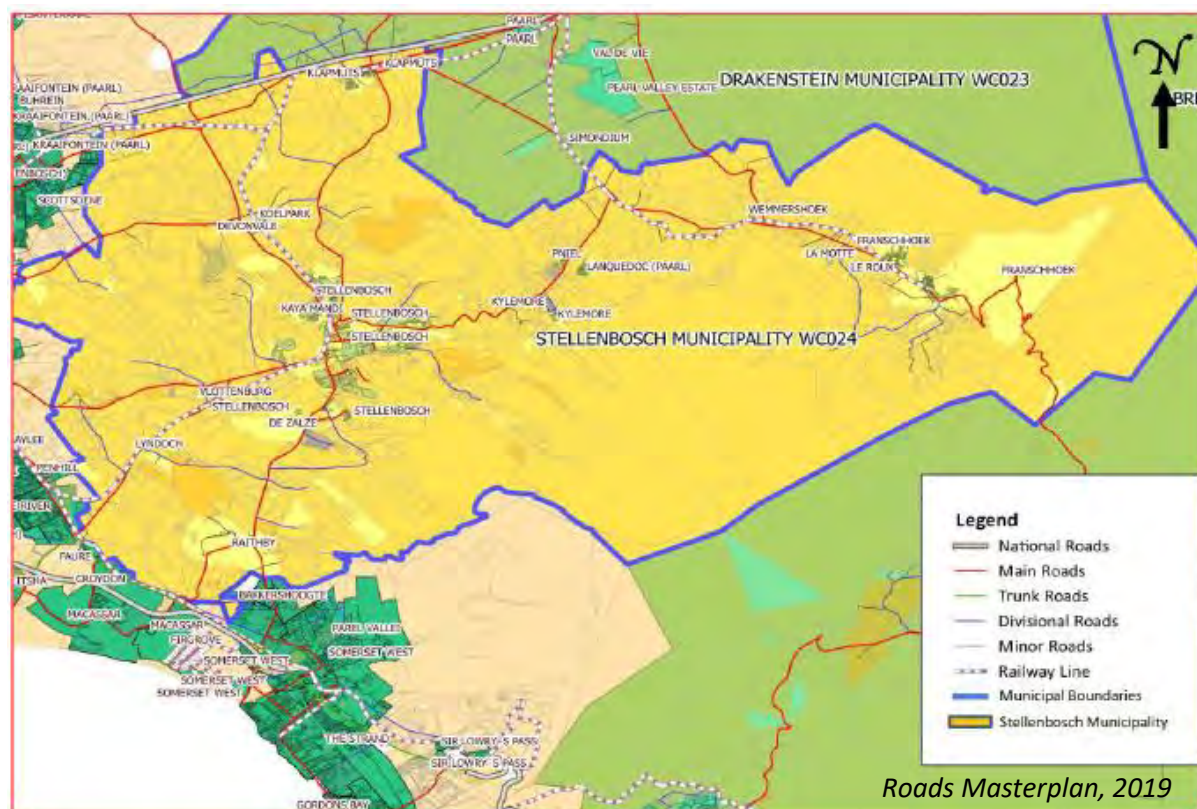


Figure 3.12: Network of Roads in Stellenbosch Municipality

The R44 is a provincially proclaimed main road (MR27) which extends from Wellington in the north in Drakenstein Municipality, continues through Agter-Paarl, intersects with the N1 just north of Klapmuts, continues through Stellenbosch and Somerset-West to Kleinmond in the Overberg District Municipality.

MR27 is a class 2 primary distributor for its entire length. It is also a single carriage road for most of its length with the exception of the sections in Agter-Paarl, Stellenbosch, between Cloeteville and Somerset West. It has 2 lanes per travel directions with shoulders.

The R304 is a provincially proclaimed main road (MR174) which extends from the R27 close to the Atlantis, Cape Town, runs along the back of Durbanville, crosses the N1 and continues past Kayamandi, into Stellenbosch where it terminates in Bird Street. MR174 is a class 2 primary distributor. It is a single carriageway road for most of its length and traffic control varies between signalised intersections and priority-controlled intersections.

The M12 (also known as Polkadraai Road) is a provincially proclaimed main road (MR177) which extends from the Parklands area in Cape Town, crosses the N1 in the Platteklouf area, extends eastwards into Stellenbosch where it terminates in Stellenbosch.

MR177 is a class 1 expressway for the section between Stellenbosch and to just north of the N1. Thereafter, it is a class 2 primary distributor. The section between Stellenbosch and the N1 is a dual carriageway road for all of its length and traffic control varies between signalised intersections and priority-controlled intersections.

At a more local perspective, Stellenbosch is located at the nexus of the R44 and the R304 (2 important corridors) also contributing to the extent of through traffic traveling through the town. It is also connected to the M12 providing a regional connection with the City of Cape Town. All of this traffic along the regional routes travelling through the town is concentrated along the section of Adam Tas Street.

Stellenbosch has also become a desirable location for business choosing to locate outside the City of Cape Town. In addition, residential properties in Stellenbosch have become extremely expensive with the result that employees working in Stellenbosch cannot afford to live in Stellenbosch and are settling in the surrounding residential suburbs and towns of Paarl, Kuils River and Somerset-West in Cape Town. This has also contributed to the increase in travel to and from Stellenbosch.

The University of Stellenbosch (US) plays a key role for the town of Stellenbosch with a steady growth over the years in the student and employee population. The university is thus a significant attractor and generator of transport trips within Stellenbosch.

3.15 Traffic Volumes and Growth Rates

The town of Stellenbosch has the highest number of attractors in the municipality and thus traffic volumes to and from town are much higher than elsewhere in the SM. It is estimated that a total net number of 18,000 persons are entering the CBD during the weekday AM peak. Based on surveyed data, the vehicle split is 93% Light vehicles: 3.7% MBTs:0.2% Bus: 3.1% Heavy Vehicles.

Table 3.21 shows the inbound and outbound traffic volume for the weekday morning peak hour for some of the major links into the CBD area. Based on the data shown in the table Traffic volumes are increasing on all the major link roads, in and out of the CBD. The nexus where all these routes congregate is along Adam Tas Road between the intersection with the R44 and R304. This section is heavily congested during the peak periods with long queues being experienced spilling back into upstream intersections. Where intersections are operating near or at capacity, the result is an increase in the length of the peak period, and increased delays and queues.

- The R44 conveys the highest vehicle volumes during the AM peak period with approximately 2,229 vph
- travelling northbound from Somerset West and Strand to the Stellenbosch CBD (June 2018 volumes). This has increased approximately 4.5% to 2336 vph (March 2019).
- Inbound volumes along the R44 (south of Technopark) has increased by approximately 13% from 2012 to 2019 to 3167 vph. Long queues and delays are experienced on the R44 during the weekday AM peak.
- The R44 conveys approximately 1,586 vph travelling southbound to the Stellenbosch CBD from Welgevonden and further north. This has increased substantially from the 1,344 vph counted in June 2018.

- The R310 (Adam Tas) has approximately 2,161 vph travelling eastbound to the Stellenbosch CBD during the AM peak period, and 1,233 vph westbound towards Cape Town.
- The R310 (Helshoogte) conveys approximately 652 vph travelling westbound to the Stellenbosch CBD during the AM peak period.
- The R304 conveys approximately 1,183 vph travelling southbound to the Stellenbosch CBD from north of Kyamandi.

Table 3.21: Inbound and Outbound Traffic Volumes (Weekday AM Peak Hour)

Road	2012		2018		2019	
	in	out	in	out	in	out
R44 (opposite Paradyskloof)	2468	1372			2286	1849
R44 (south of Technopark)	2794	782			3167	1157
R44 /Van Reede (north of Technopark)			2229	1896	2336	1949
R310 (west of R44)	665	491			1465	1045
R310 (before Polkadraai)	665	491				
R310 (Devon Valley Road inter.)	1725	1463				
R310 (at Dorp Street)			1984	1200	2161	1233
R304 (north of Kayamandi)	1266	429				
R304 (at George Blake Rd)			1183	674		
R44 (north of Helshoogte)	1447	479				
R44 (at Helshoogte)			1344	695	1586	742
R310 Helshoogte (east of Cluver)	530	258				
R310 Helshoogte (at La Colline Road)			508	792	652	1244
Jonkershoek Road (east of Omega Road)	139	147				

Source: Surveyed Traffic in Roads Master Plan, 2019

Figure 3.13 shows the percentage of traffic originating from the various access routes into the town. A high proportion of the traffic on all links i.e. R44 (north) - 47%, R304 -83%, M12- 61%, R44 (south) - 42% and R310 – 49% are bound for Stellenbosch CBD. Figure 3.14 shows the origin of traffic between 06:00 and 09:00 destined for the Stellenbosch CBD and shows that a large number of trips originate in surrounding neighbourhoods as well as Franschhoek, Somerset West and Bellville. This places a large amount of pressure on Adam Tas/R44 segment since it is the main link providing access from north, south and westbound traffic on both inbound and outbound directions.

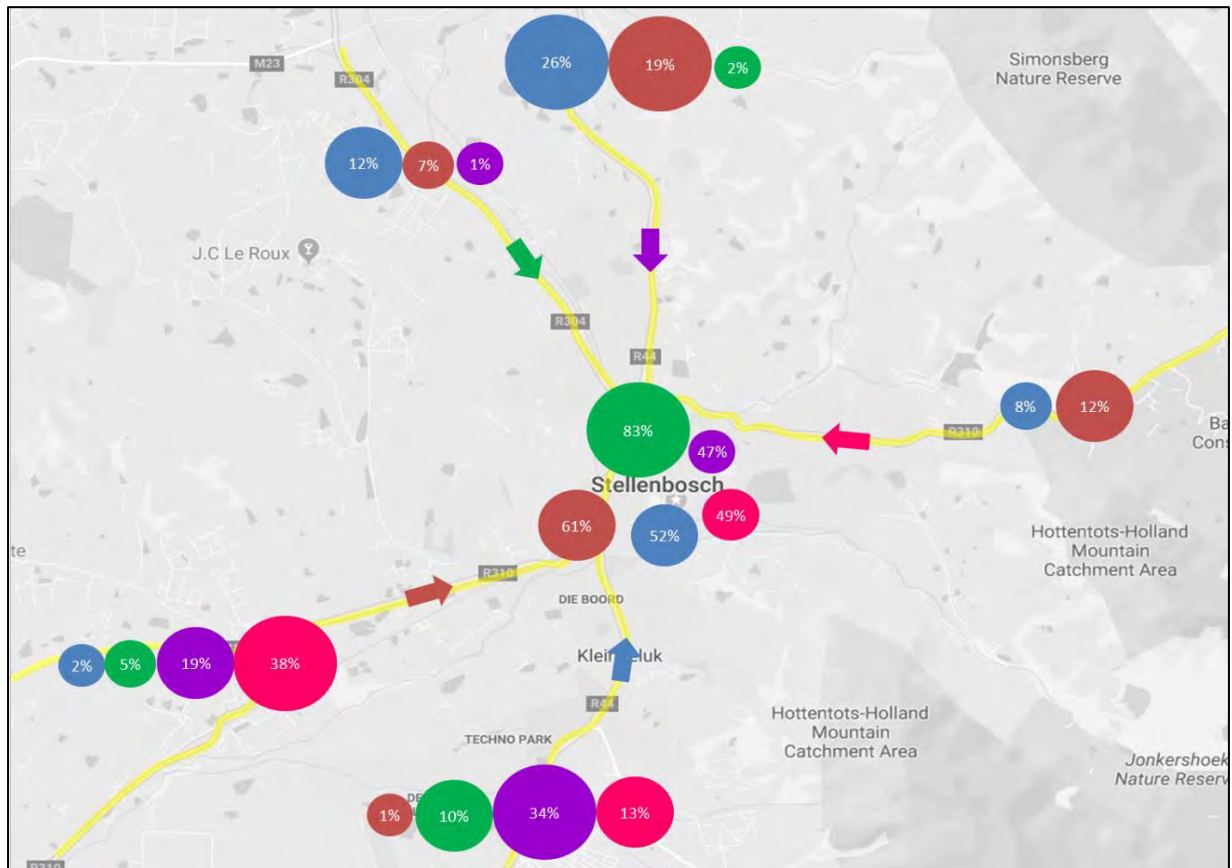


Figure 3.13: Traffic Patterns

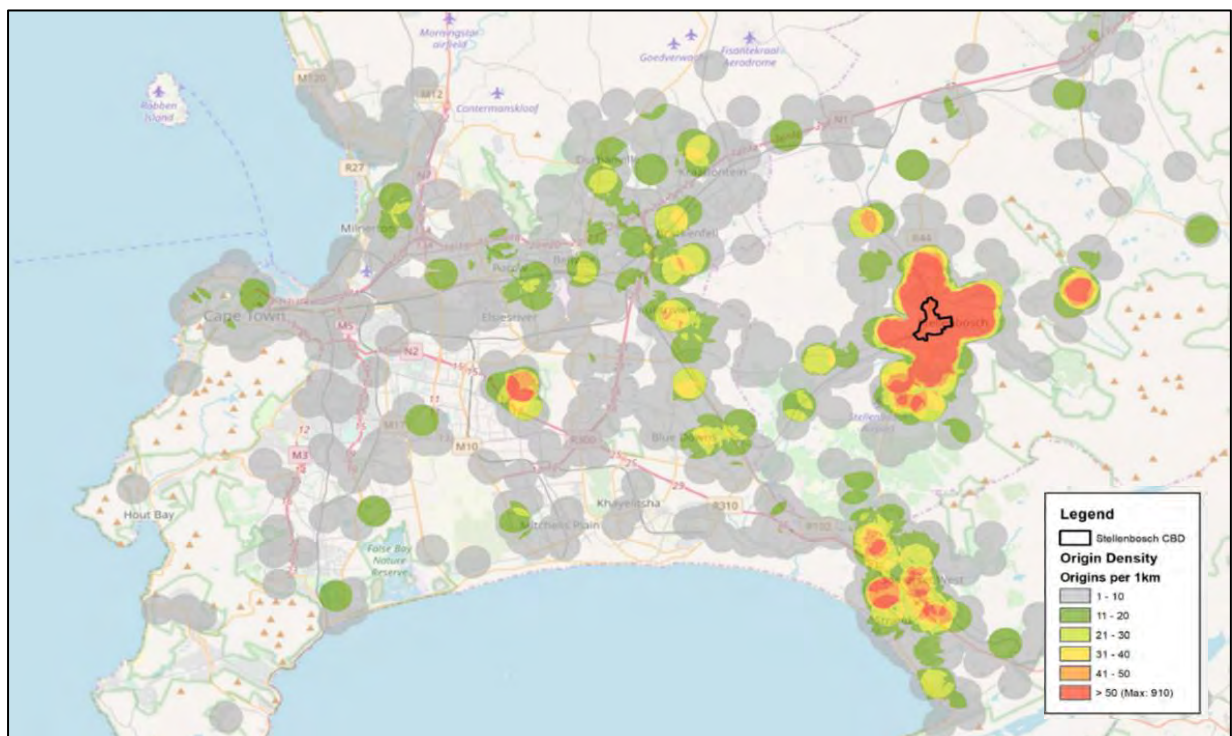


Figure 3.14: Origins to Stellenbosch CBD between 06:00 – 09:00

3.16 Parking

In recent years the demand for parking in Stellenbosch particularly within the CBD has been a growing concern due to:

- Influx of US students traveling with private transport
- General increase in car travel resulting in an increased demand for parking
- Increased development within the CBD with limited parking has also put significant pressure on available on-street parking; increased demand for parking, but the supply thereof has not increased as well

Paid parking within certain areas and the resulting increases in the parking tariffs have resulted in an increased demand for parking in areas on the outskirts of the town.

The area bounded by Adam Tas, Banhoek, Marais and Suidwal in the CBD has 9 229 parking bays of which 7 256 bays are off-street. In addition, of this total there is almost a 50/50 split between private and public parking and 29% of the public parking is paid parking.

3.17 Pavement Assessment

Table 3.22 summarises the extent of the road network in SM by type of road such as paved, gravel, etc. There is a total of 312.5 km of road, 288.5km (92%) are flexible paved roads and 11.1 km (3.5%) are gravel roads.

Table 3.22: Extent of Stellenbosch Municipality Road Network by Type¹⁵

Type of Road	Extent (km)	%
Paved (Dual carriageway)	5.5 km	1.76%
Paved (flexible)	288.5 km	92.35%
Paved (block)	6.0 km	1.92%
Paved (concrete)	0.1 km	0.03%
Roundabouts	1.1 km	0.35%
Gravel	11.1 km	3.55%
Earth	0.1 km	0.03%
Total	312.5 km	1.76%

Table 3.23 summarises the results of the latest SM Road Asset Management Plan, dated April 2019 as sourced from the Roads Master Plan. The majority of the roads in SM are in category 1-very good or category 2- good. Franchhoek, Pniel, Raithby and Stellenbosch have a small portion (total of 1.3km) of their roads in very poor condition.

¹⁵ Stellenbosch Municipality Roads Master Plan, 2019

Table 3.23: General Road Condition for Stellenbosch Municipality

Town	(1)	(2)	(3)	(4)	(5)	TOTAL
	Very Good	Good	Fair	Poor	Very Poor	
Devonvale	3.4	0.2	3.6	0.6	0.0	7.8
Franchhoek	20.7	8.3	2.3	0.5	0.4	32.2
Klapmuts	14.8	3.2	1.7	1.1	0.0	20.8
Kylemore	3.4	2.2	0.8	0.4	0.0	6.8
La Motte	1.9	0.1	2.0	0.6	0.0	4.6
Lanquedoc	6.1	0.9	1.0	0.7	0.0	8.7
Meerlust	0.0	0.8	0.2	0.0	0.0	1.0
Pniel	7.6	1.4	0.5	0.9	0.2	10.6
Raithby	1.2	1.0	0.4	0.0	0.2	2.8
Stellenbosch	118.7	86.3	10.6	0.9	0.5	217
TOTAL	177.8	104.2	23.2	5.8	1.3	312.3

3.18 Current Person Trips

Table 3.24 shows the current trips as sourced from the latest Roads Master Plan for Stellenbosch Municipality. It is assumed that on average there are 1.08 workers per high income and 1.12 workers per low income household group. It shows 2018 trips to be approximately 26 500 split 54:46 low to high income groups.

Table 3.24: Project Trips¹⁶

Scenario	Income Group	Households (%)	Average Workers Per Household	Person Trips (%)
2018	Higher Income	11 173 (46%)	1.08	12 085 (45%)
	Lower Income	12 969 (54%)	1.12	14 464 (55%)
	2018 TOTAL	24 142		26 549

Figure 3.15 on the following page is a depiction from the base 2018 Transport Model and shows existing traffic volumes on the various road network links in the town of Stellenbosch. The north-south (R44) and east west (M12) links into town have the highest traffic volumes.

¹⁶ Stellenbosch municipality, Stellenbosch municipality Roads Master Plan 2018 Update, August 2019

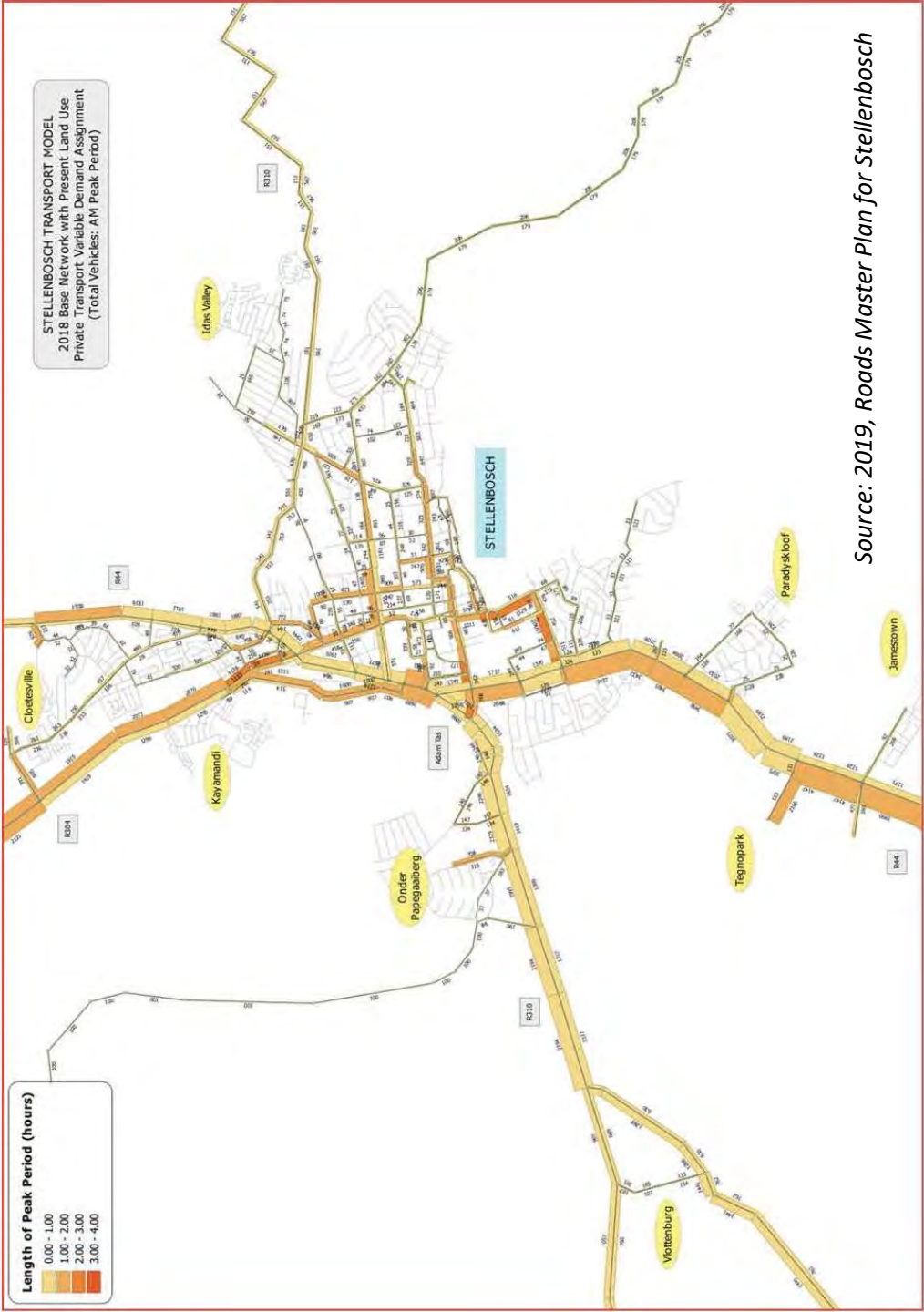


Figure 3.15: 2018 Weekday AM Peak Traffic Volumes Modelled

3.19 Freight Transport

Figure 3.16 shows the heavy vehicle volumes¹⁷ on these major roads. During the number plate survey that was undertaken for Stellenbosch Municipality, the heavy vehicles were surveyed during the PM peak period – 3PM to 6PM. This provides a limited snap-shot of the heavy vehicle operational hours.

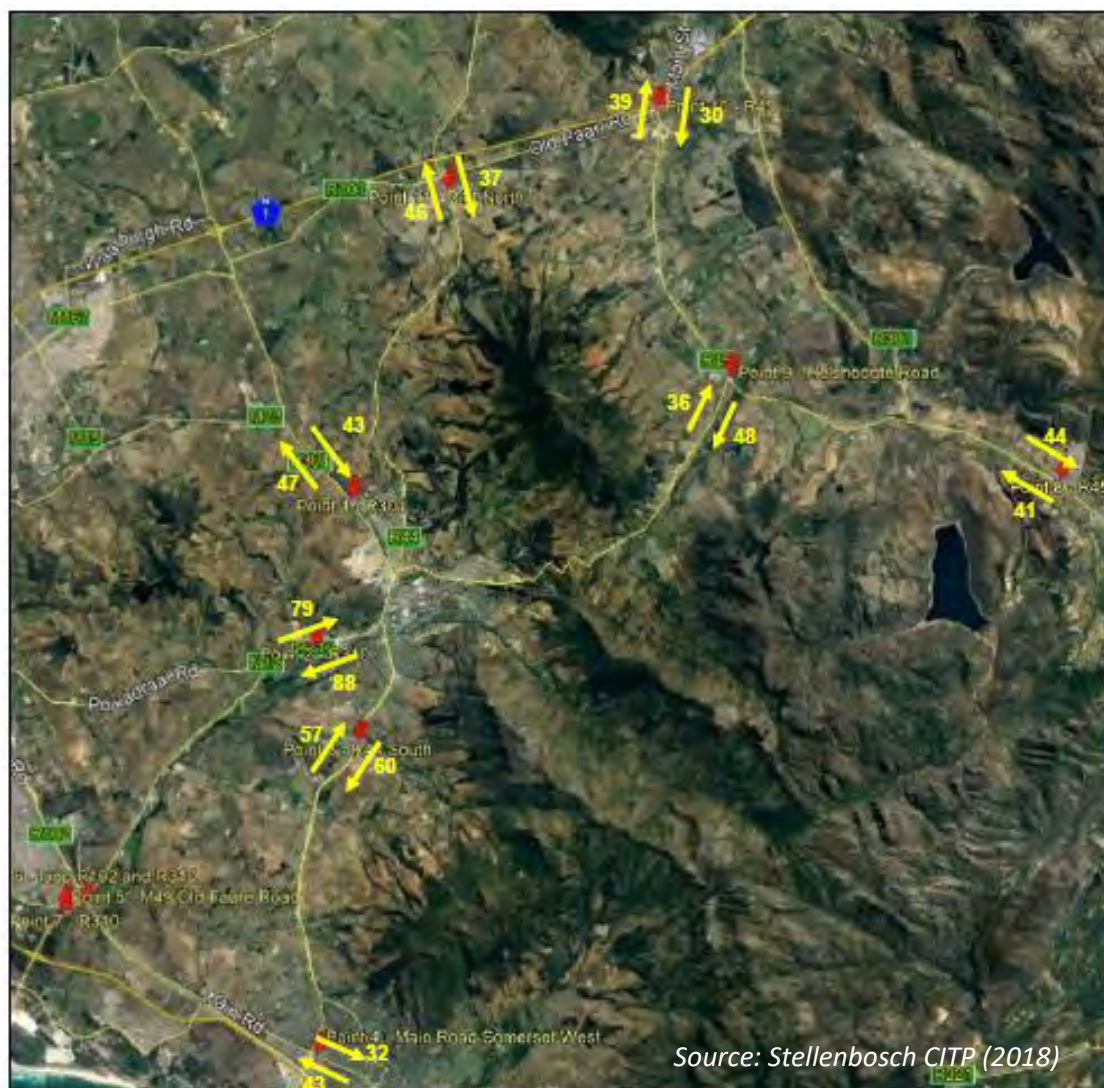


Figure 3.16: Heavy Vehicle Volumes Sourced from Number Plate Survey

Freight routes shown entering the Stellenbosch Municipal Area from Cape Town are Bottellary Road (the M23) and Polkadraai Road (the M12). The R44 from north and south of Stellenbosch, the R304 and the R310 west and east, the R101 and the R45 and the R301 in the Franschhoek Valley also carry significant volumes of freight to/from areas within Stellenbosch Municipality.

¹⁷ Freight Volumes as sourced from number plate survey contained in Stellenbosch CIP, 2018

The Freight Strategy¹⁸ of the CWDM reported on the location of wine cellars and other agriprocessing plants, as well as the location of industry in the Stellenbosch area, and has concluded that the main routes that connect Stellenbosch to Somerset West (the R44), Kuils River (R310), Klapmuts (R44), Brackenfell (R304) and Franschhoek (R310), as well as R45 between Franschhoek and Paarl, carry a significant amount of freight. In addition secondary routes that provide access to farming areas off these routes also carry freight in the form of inputs into agri-processing (e.g. delivery of bottles) and distribution of the finished product (e.g. delivery of wine to the Cape Town Harbour for export). These roads in particular are impacted by the heavy vehicles that use them i.e. the Stellenbosch link to Parow (where distribution centres are located) via M12 (Stellenbosch Arterial).

Heavy vehicles do impact the already congested access roads through Stellenbosch particularly to access local industrial areas.

Deliveries to businesses in the Stellenbosch CBD have been noted as being particularly problematic during peak travel times

3.20 Financial Information

3.21 Capital Budgets

Adequate funding to realise transport projects listed in the ITP is always a concern. Typically the lack of progress on transport projects listed in the previous ITPs can be specifically attributed to this factor.

The extent of past, current and next three financial years future transport budgets has been summarised in the table below for SM. Transport is a sub-sector of Infrastructure Services and thus the table is an extract on of the budgets for transport.

Table 3.25: Capital budgets for roads and transport projects

Municipality	Annual Transport Budget (million Rands)			TOTAL MTEF
	2020/21	2021/2022	2022/2023	
Transport	52.4	40.09 (10%)	34.9 (8%)	127.39
Infrastructure Services	317.26	359.72 (87%)	346.28 (81%)	1023.26
Total Municipal Budget	369.66	413.1	425.9	1150.65

Source: SM 2020

¹⁸ Cape Winelands District Municipality, Cape Winelands District Freight Strategy, Final Report, prepared by Gibb, 20 February 2012

3.22 Funding Sources

Availability of funding to implement the prioritised projects is limited. While the various transport projects compete against each other for funding, they also compete with other essential services such as water, housing, health, etc. The main existing sources of capital funding are as follows:

- Capital replacement reserves
- Provincial grants
- National grants
- External loans
- Other

These are further discussed hereafter.

Capital Replacement Reserves

Internally generated funds are funds generated from services or other initiatives within the LM. The distribution of this funding to transport related projects is limited by the competing needs of transport with other essential services such as water and sanitation, housing and electricity.

Direct or indirect National and Provincial grants

The LM sources between 15 and 20 % of its budget from this category, 39% from conditional grants from national departments and 17 % via the provinces. Direct funding from the transferring authority (National or Provincial Departments) is allocated directly to the municipality. The transferring authority determines the conditions that apply.

- Allocation criteria – mathematical formula that is “need-based” (operating cost of a municipality to deliver basic needs to households)
- Minimal process conditions – basic financial governance and governance (budget and financial report).
- Funding windows – portions of the grant that are each intended for different funding purposes and/or uses a different set of allocation criteria {suggesting funding priorities to LMs – nodes identified in local Integrated Sustainable Rural Development Programme (ISRDP) and Urban Renewal Programme(URP)}
- In accordance with the Division of Revenue Act (reviewed annually)

Indirect funding is allocated via an intermediate management body (Provincial Department) with discretionary powers to allocate funds. It can also happen via the Development Bank of SA (DBSA) through in-kind grants i.e. funding controlled by National Treasury. National Treasury has contracted the DBSA to purchase financial management services that are supplied to LMs in kind. The intermediate authority decides whether to transfer the grant in cash or kind. The intermediate authority disburses the funds in terms of intervention programmes, which they are required to develop in order to access national grants.

- National Treasury: DORA (Division of Revenue Act) Allocations
- The National Department of Transport: Public Transport Infrastructure Fund: The Public Transport Infrastructure fund, established by the National Treasury for administration by the

National Department of Transport, was created to provide a dedicated fund for ensuring the delivery of an improved public transport and non-motorised transport system.

- Special Municipal Innovation Funds (SMIF) and Integrated Urban Development Grant (IUDG): The IUDG gives effect to providing a funding mechanism to support municipal infrastructure.
- The IUDG is an infrastructure transfer mechanism geared to making the system of transfers to LMs simpler, more certain and direct. Its conditions are more flexible, designed to support the capital budgets of LMs, and to facilitate integrated development planning.
- The IUDG will not fund specific projects, but is designed to complement the capital budgets of LMs (similar to the provincial infrastructure grant). Reporting on spending will therefore be on the entire capital budget of LMs, which also has to ensure that there are sufficient operational budgets in the future to fund such capital expenditure. Individual national line departments will continue to lead the monitoring and support of implementation in their specific functions and priorities.

The IUDG has been set up to merge the following funding programmes in a phased manner:

- Consolidated Municipal Infrastructure Programme, in support of internal bulk, connector infrastructure and community facilities to poor households
 - Community based Expanded Public Works Programme, in support of the creation of community assets in rural, historically disadvantaged communities
 - Local Economic Development Fund, in support of planning, and implementation of job creation and poverty alleviation
- Neighbourhood Development Partnership Grant's¹⁹ (NDPG) website states that this grant is a conditional grant to municipalities through DORA. It is planned to allocate an amount of R10bn over a ten year period for about 100 initiatives. The NDPG is driven by the notion that public investment and funding can be used creatively to attract private and community investment to unlock the social and economic potential within neglected townships and neighbourhoods and that this in turn will contribute to South Africa's macro-economic performance and improve quality of life among its citizens.

Provincial Grants

- The Provincial Department of Transport and Public Works Allocations: Transfer payments from the PGWC can be made to the LM to maintain the proclaimed LM main roads. Budget allocations are based on the PGWC PMS and a priority listing. LMs need to provide 20% of the funds while PGWC subsidises the remaining 80%. All information about funding categories, timeframes and procedures on this subject is contained in "Guidelines for the allocation of funding and the execution of projects in terms of proclaimed LM roads", a downloadable document from the provincial roads website at <http://rnis.wcape.gov.za>.

External Loans/Borrowing

LMs can acquire loans to fund high-priority projects through various means which are further discussed hereafter.

Capital transfers recognised

The single most important source of local government transfers is the Equitable Share (Local Government's share of the revenue raised by the National Government) designed to help LMs cover operational costs of providing basic services to poor households. The LMs sources about 44 % of its budget from unconditional funding (Local Government equitable share).

Public development contributions and donations

Donor funding has a variety of objectives:

- Crime prevention
- Community participation
- Policy support programmes
- Strengthening local governance programmes

4 SPATIAL DEVELOPMENT FRAMEWORK

Transport systems and land use patterns are directly related and influence each other. The system of roads, public transport and other transport elements impact land use development, while the nature and distribution of land uses affect travel patterns and the location of transport infrastructure because it drives where people live and work.

The spatial development framework chapter summarises the existing land use patterns or spatial structure as well as provides an overview of the agreed spatial direction and growth as sourced from existing spatial policy frameworks. These Policy Frameworks offer the agreed direction for Stellenbosch's growth which offer a picture for how the demand for travel should be planned for by future transport systems for Stellenbosch.

4.1 Spatial Structure

Figure 4.1 was sourced from the latest SDF but the approved structure for Stellenbosch was previously contained in the 2013 SDF. SM is located between the two national routes i.e. N1 to the north and N2 to the south.

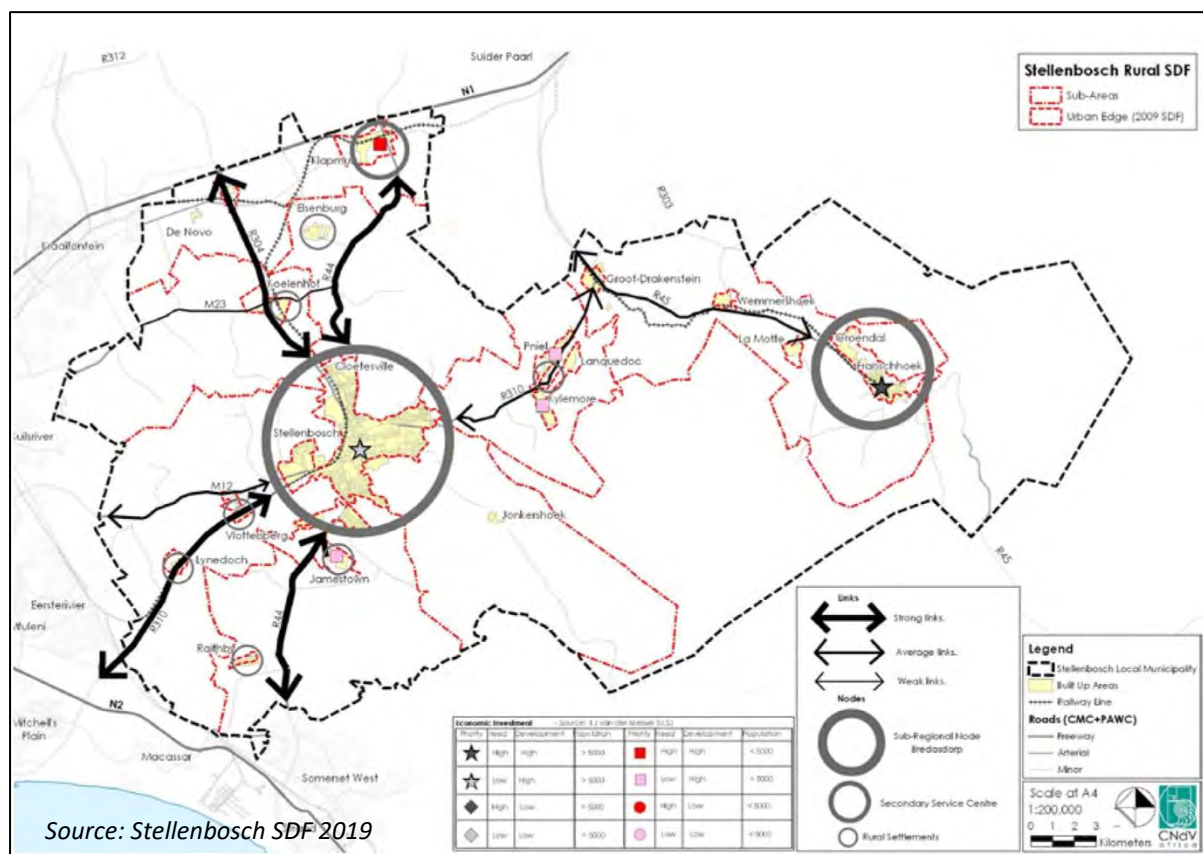


Figure 4.1: The 2013 Approved Stellenbosch SDF diagram illustrating hierarchy of settlements, linkages and investment priorities

Stellenbosch, Franschhoek and Klapmuts serve as being the main urban hubs or settlements. The town of Stellenbosch dominates as the largest urban area and acts as the administrative centre. The town is a historic university town and has been growing rapidly over the past few years.

The R44, R304 and R310 are the main north-south structuring connectors. These provide linkages to Paarl in the north and Somerset West/Khayelitsha in the south. The R310 also provides an internal east-west connection to Kylemore and Pniel. Franschhoek is connected to Paarl via the R45 and R301.

In addition to the larger settlements, there are also a number of smaller villages, including Jamestown, Pniel, Johannesdal, Lanquedoc, Lynedoch, and Raithby. Smaller nodes have emerged around agricultural service centres, for example, Koelenhof and Vlottenburg.

Stellenbosch operates closely with neighbouring municipalities particularly the Cities of Drakenstein and Cape Town. In fact the Western Cape Provincial Government in their spatial planning has recognised the region as a functional area. This Cape Town Functional Area includes The City of Cape Town, major towns within Cape Winelands, West Coast and Overberg District Municipalities as well. The implication of this functioning is across economic and social activity with a significant increase in demand for access between towns within the functioning region. This functional relationship means that there is a significant demand for travel between towns in SM and surrounding areas in the City of Cape Town (Bellville, Khayelitsha, Somerset West, Eersteriver, Kuilsriver), Drakenstein (Paarl, Wellington, Mbekweni), Breede Valley (Worcester, Ashton, Robertson), West Coast (Malmesbury) and

Overberg (Hermanus, Grabouw). 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 is also likely to impact future public transport patterns and in particular inter-municipal routes. Stellenbosch is strategically located within this functional area.



Figure 4.2: Cape Town Functional Area

4.2 Housing Projections and Proposed Development

According to the latest Spatial Development Framework (SDF) the towns of Stellenbosch and Klapmuts are envisioned for the largest focus of future development. The potential of Klapmuts for economic development and associated housing is deemed particularly significant since it is located along the metropolitan area's major freight route. Klapmuts is envisioned as a significant new regional economic node within the metropolitan area and a spatial target for developing a consolidated platform for export of processed agri-food products e.g. inland packaging and containerisation port.

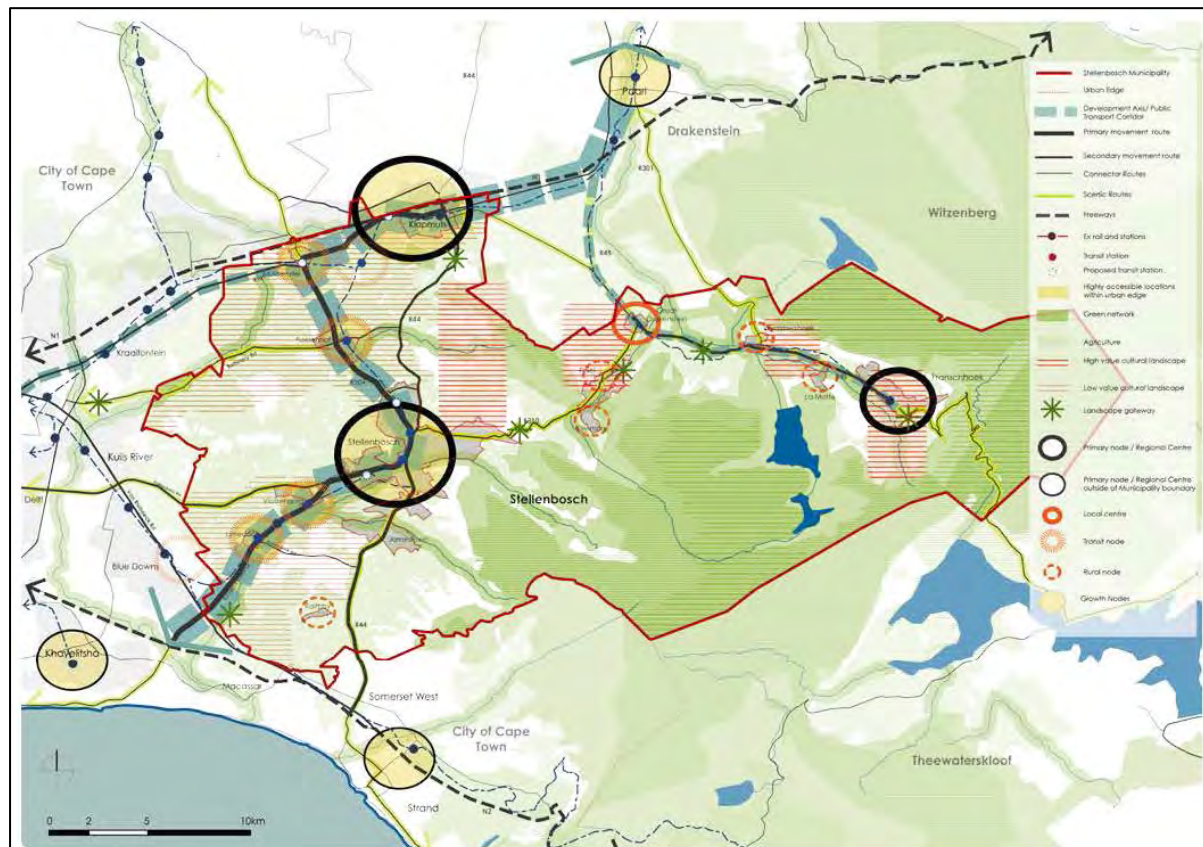


Figure 4.3: Concept of Growth Corridor along R304 and R310

Over the longer term, the Muldersvlei/ Koelenhof and Vlotenburg/ Lynedoch areas also have the potential to develop into more significant settlements. Over the longer term, these expanded settlements are foreseen to fulfill a role in containing the sprawl of Stellenbosch town which threatens valuable nature and agricultural areas. It is argued that the growth of the municipal area must be more sustainable and thus must be supported by more sustainable modes of transport and other integrated transport solutions, with a particular focus on public transport and non-motorised transport.

Table 4.1: Areas of Development and Proposals for Future Growth

Development Area	Proposals for Future Growth	Transport Proposals
Town of Stellenbosch	<ul style="list-style-type: none"> Residential opportunity for all groups Managed residential growth with inclusive higher density housing redevelopment opportunity along Adam Tas Corridor which stretches from the Droë Dyke and the Old Sawmill sites in the west along Adam Tas Road and the railway line, to Kayamandi, the R304, and Cloetesville in the north. Infill opportunities specifically in Cloetesville, Idas Valley, Stellenbosch Central, along the edges of Paradyskloof, and Jamestown. Housing in The Techno Park area. 	<ul style="list-style-type: none"> Provision of sustainable transport public transport and NMT Increased pedestrianisation Reduced private vehicles commuting
Klapmuts	<ul style="list-style-type: none"> Distell has relocated many of its operations in Klapmuts e.g. beverage production, bottling, warehousing and distribution facility on Paarl Farm 736/RE, located north of the N1 takes up 53ha of 200 site. The project proposal includes commercial and mixed-use development on the remainder of the site. Opportunities for Distell's suppliers and other business development to develop in the Klapmuts North area. Requires significant infrastructure and bulk services investment to unlock development potential. 	
Vlottenburg	<ul style="list-style-type: none"> 52 ha includes 375 single residential units, 90 townhouses, 343 walkup apartments, 97 mixed use flats/apartments, hotel school, medical centre, mixed use buildings, hotel and conference facility, education facilities (including a private school), sports fields and private open space. 	<ul style="list-style-type: none"> More frequent, flexible public transport service can be provided along the Baden Powell-Adam Tas corridor.

In order to understand the future demand for public transport travel from the various neighbourhoods or towns in the Stellenbosch Municipal Area, a table of proposed developments was sourced from the Planning Department. This table summarised the extent and location of the developable land, the proposed density, type of housing and the number of households projected by timeframe i.e. short (< 5 years), medium (10 years) and long-term (> 15 years). In an attempt to get a better handle of what these developments will mean for future public transport demand, the individual developments were grouped by town. In the case of Stellenbosch town which is more expansive, neighbourhood or areas were identified as shown in Figure 4.4 - Figure 4.8 below.

Table 4.2 and Table 4.3 summarises the number of housing units and the floor area respectively for each of these areas. There are approximately sixty thousand dwelling units projected over the next 20 years with close to fifteen thousand of that to be realised in the short term (< 5 years). Over the long-term the top areas identified within Kayamandi, the Stellenbosch CBD, Klapmuts and Franschhoek.

Table 4.2: Proposed Residential Housing Units by Project Timeframe

Neighbourhoods/Areas/Towns	Short < 5years	Medium 10 years	Long >15 years	Total
Cloetesville	376	507	1459	2342
Dalsig/Paradyskloof/Brandwag	481	353	1315	2149
Franschhoek	1392	1085	4279	6756
Idasvalley	383	355	110	848
Jamestown	1070	1070	1277	3417
Kayamandi		9488	2468	11956
Klapmuts	910	450	6672	8032
Koelenhof	804	21	2837	3662
Onderpapegaaiberg		322	185	507
Pniel	1171	1897	2241	5309
Raithby	1344	560	145	2049
Stellenbosch CBD	6379	2278	596	9253
Techno Park/Farmers Winery/Die Boord	604		3740	4344
Grand Total	14914	18386	27324	60624

Source: Stellenbosch Planning Department 2019

Figure 4.4: Map of Development Proposals Stellenbosch Municipality

Figure 4.5: Map of Development Proposals in the Town of Stellenbosch Grouped by Area

Figure 4.6: Map of Development Proposals in Klapmuts

Figure 4.7: Map of Development Proposals in Franchhoek

Figure 4.8: Map of Development Proposals in Pniel

Table 4.3 shows the list of industrial and commercial developments which act as trip attractors. There is a total of 900 thousand square metres of floor area over the long-term horizon. The main areas of growth in the short term is Klapmuts, Onderpapegaaiberg and Koelenhof.

Table 4.3: Proposed Floor Area (m²) for Industrial and Commercial Developments

Neighbourhoods/Areas/Towns	Short	Medium	Long	Total
Cloetesville				
Dalsig/Paradyskloof/Brandwag	15000			15000
Franschhoek	30900			30900
Idasvalley				
Jamestown				
Kayamandi				
Klapmuts	75100	68400	260300	403800
Koelenhof	75900	11200	43600	130700
Onderpapegaaiberg	77400			77400
Pniel		10800	84900	95700
Raithby			2800	2800
Stellenbosch CBD	46600			46600
Techno Park/Farmers Winery/Die Boord	33900	74800		108700
Total	354800	165200	391600	911600

4.3 Largescale Housing Projects

Various largescale housing projects as shown in Table 4.4 have been identified for future residential development which may be Mega projects (Mix-used developments), Upgrade of Informal Settlements (UISP), GAP market / FLISP subsidies, BNG Housing / subsidised housing (including backyarders), CRU/Social Housing or servicing of sites.

These housing projects could be rolled out over the next 3 financial years, however the implementation will be dependent on the Division of Revenue Act's (DORA) allocations provided to the municipality and many other factors such as the land-use application process, Environmental Impact Assessments, etc. The development areas will require internal local road networks with connectivity to the higher order local roads, NMT and public transport accessibility.

Table 4.4: List of Largescale Housing Developments

Area	Nature/Description of the Future Development
Kayamandi northern extension	Approximately 86ha of developable land. Potential of +/- 6 000 residential opportunities of various housing typologies
Jamestown Phase 2 & Phase 3	Potential of +/- 400 housing opportunities. BNG, lower GAP-housing, high density units and serviced sites
Jamestown Phase 4	No development rights for this portion has been applied for. Possible opportunities will be a combination of lower GAP-housing, bonded houses (higher GAP-housing) and upmarket developments

Area	Nature/Description of the Future Development
Botmaskop	Approximately 98ha (portion of Erf 3363 and a portion of Erf 3393) and combined sites of ± 35 -40ha Opportunity for social and middle income housing. Potential for +/- 600 Social housing opportunities Lower GAP-housing, high density units, bonded houses (higher GAP-housing) and upmarket developments
Droëdyke	The site comprises 64ha privately owned land, 25,3ha municipal land and 102,9ha state land. Potential for +/- 3550 mixed-use housing opportunities
Cloetesville	The site comprises 17.6ha Portion of Erf 7001, Erf 8915 and Smartie Town (Municipal owned land). Undetermined potential residential housing opportunities
De Nova	The site comprises a 193ha portion on Portion 10 of Farm 727 (Agricultural/institutional land outside the urban edge). Potential +/- 184 mixed-used opportunities
Idas Valley	Approximately 9.5ha (portion of Erf 9445 and Erf 11330, Municipal owned land). Potential +/- 350 residential housing properties and +/- 89 mixed used opportunities
Jonkershoek (Bosdorp)	Approximately 2ha Municipal and Government owned land
Klapmuts	Approximately 39.2ha (portion of Erf 342, Erf 2181, Erf 2183 and portion 2 of Farm 744, Municipal owned land) Potential +/- 1319 subsidized housing opportunities and +/- 295 other opportunities
Kylemore	Approximately 5.9ha (Portion of Erf 64, Government owned land) Potential +/- 171 other opportunities
La Motte	Approximately 76.1ha (portion of Erf 1158, Erf 1339, Government owned land) Potential +/- 592 other opportunities
Langrug	Approximately 12.7ha on various erven, Municipal owned land Potential +/- 1200 other opportunities
Vlottensburg	Approximately 4.4ha on various farms 393, Municipal owned land Potential +/- 144 other opportunities

4.4 Current and Projected Trips

Table 3.24 shows the current and project trips as sourced from the latest Roads Master Plan for Stellenbosch Municipality.

It shows 2018 trips to be approximately 26 500 split 54:46 low to high income groups based on an average of 1.08 and 1.12 worker per higher and lower income groups respectively. Two future 20 year growth scenarios have been modelled based on a more conservative trend and a slightly higher or more intensive densification.

The future trips are projected to increase to between 48 000 (trend) and 49 000 (densification) by 2040. These additional trips and the distribution of new developments will need to be accommodated for in the transport system. For example:

- In the public transport system; with additional operating licenses, public transport infrastructure (ranks, interchanges and shelters)
- In the road infrastructure network with new roads or road upgrades, interchanges, etc.

- In the provision for walking and cycling

Table 4.5: Project Trips²⁰

Scenario	Income Group	Households (%)	Average Workers Per Household	Person Trips (%)
2018	Higher Income	11 173 (46%)	1.08	12 085 (45%)
	Lower Income	12 969 (54%)	1.12	14 464 (55%)
	2018 TOTAL	24 142		26 549
2040 Trend	2018 – 2040 Growth	94.0%		81.5%
	Higher Income	20 622 (44%)	1.14	23 550 (49%)
	Lower Income	26 225 (56%)	0.94	24 640 (51%)
	2018 – 2040 Growth	46 847		48 190
2040 Densification	2018 – 2040 Growth	97.2%		85.6%
	Higher Income	21 381 (45%)	1.15	24 645 (50%)
	Lower Income	26 225 (55%)	0.94	24 640 (50%)
	2018 TOTAL	47606		49 285

²⁰ Stellenbosch municipality, Stellenbosch municipality Roads Master Plan 2018 Update, August 2019

5 TRANSPORT NEEDS ASSESSMENT

Chapter 4 of the Local Government: Municipal Systems Act requires of municipalities to maintain a culture of community participation. According to Section 16(1)(a)(i) of the MSA, “A municipality must develop a culture of municipal governance that complements formal representative government with a system of participatory governance, and must for this purpose encourage, and create conditions for, the local community to participate in the affairs of the municipality, including in the preparation, implementation and review of its integrated development plan in terms of Chapter 5”. The SDF, IDP, Budget, Sector Plans as well as major municipal policies, by-laws, decisions, etc. therefore have been publically consulted to ensure that they are developed with community inputs and reflecting community needs.

Individual ward meetings were held in October 2019 to determine the needs of the community that need to be addressed to improve the quality of life of residents in the greater Stellenbosch area. Information about the schedule of IDP/Budget Public Engagement Meetings in October 2018 were communicated both internally and externally. Internal communication was sent to management, Councillors, the Executive Mayoral Committee, Council and all officials within the Municipality. External communication about the meetings taking place was done through advertising in the main local newspaper as well as the community newspaper distributed free of charge. The schedule and advertisement was also published on the Municipality’s official website, social media, distributed as flyers, loudhailed in the suburbs and SMS cellular phone messaging. In addition thereto, the Municipality provided transport to members of the public who wished to attend the public engagements.

A summary of the transport needs from the gap analysis (vision vs status quo) supported by needs recorded as part of the consultation process is discussed below according to broad themes:

A need for an improved public transport system

The vision for SM as well as all five of the strategic focus areas (Valley of Possibility, Green and Sustainable Valley, Safe Valley, Dignified Living and Good Governance) on some level all need a good public transport system. In the public meetings issues around improved regional services between Paarl and Stellenbosch, security on public transport particularly at ranks was emphasised as well as increased job creation and training youth.

Better accommodate all people including those with disabilities

The existing transport system in SM has made limited provision i.e. infrastructure or services for people with special needs. For example public transport vehicles (road based MBTs, buses or rail) are not equipped to accommodate universal access. There is not a comprehensive network of pathways and sidewalks and not all intersections are treated to accommodated people with disabilities (dropped kerbs and tactile paving). While access into buildings are not ubiquitously equipped with ramps for wheelchairs and prams.

Provide walking/cycling paths and green spaces

Numerous requests were raised in the public meetings for the provision of more sidewalks (particularly in Raithby), running or cycle routes. As well as safe raised road crossings particularly in schools precincts as well as and railcrossings (Vlottenburg, Old Paarl Road). Suggestions for bollards and enforcement to prevent parking on pavements as well as the beautification of open spaces.

Upgrade roads infrastructure

Improvements and upgrades of the existing road networks was also a common theme in the public meetings. Specific areas of concern included:

- Resurfacing of roads, (Luckhoff Street, Tindall Street, top part of Rustenburg Road from the mini circle in the direction of Vine Yard Court, Mostertdrift, Devon Valley)
- Visibility of street names (on poles) on the sides of buildings and directional signs e.g. Die Braak
- Upgrade of intersections (Alexander/R44 streets,
- Street lighting (in the areas of Curry, Pine, Primrose, Eike, Jakaranda, North-End, Silvia and Vredelust Streets)

It is also imperative for transport infrastructure support the requirements that would make sustainable modes of transport more attractive. This would mean the provision of some form of dedicated routes and comprehensive walking/cycling path network. In particular the improvement of regional road and rail connections, public transport ranks, stops/shelters, stations and interchanges. Providing a solution for capacity on north-south link along Adam-Tas corridor is also an urgent need to ensure that future economic growth and development is supported.

Additional parking and park/ride facilities

Another need identified at public meetings were additional parking or park and rides.

(Parking embayment opposite Community Market/ Flea market at the corner of Rustenburg Road and Sonneblom Street).

A need for better road safety, traffic calming and improved law enforcement

A need for better road safety conditions with requests from public meetings to focus on improved traffic enforcement and introducing more traffic calming mechanism particularly around schools (R45, R310 traffic Calming – Meerlust, Wemmershoek, Maasdorp R45, speed humps in Lanquedoc, Vredelust Street, c/o Crombie and Last Street, c/o Gone and Cornelius Street, Klapmuts) as well as the installation of road signs (Mostertsdrift).

A Need for More Jobs and Skills Training

High levels of unemployment and low skills levels was also another common them of concern at the public meetings. A request that the municipality find ways to increase economic opportunities and job creation particularly for youth.

6 PUBLIC TRANSPORT PLAN

It is imperative that a comprehensive and feasible PUBLIC TRANSPORT PLAN urgently be developed for the municipality in order for SM to have a clear step by step plan of how to realise this type of public transport system. In absence of this plan, this chapter provides a broad concept of the strategic components required for public transport in Stellenbosch. These together with more detailed public transport network, operations, costing, business modelling and financial feasibility will need to be undertaken in future planning.

6.1 State of Existing Public Transport

Table 6.1 summarises some of the key concerns around the current state of public transport in SM that urgently needs to be addressed through the preparation of a comprehensive Public Transport Plan.

Table 6.1: Some Key Concerns Around the Current State of Public Transport in SM

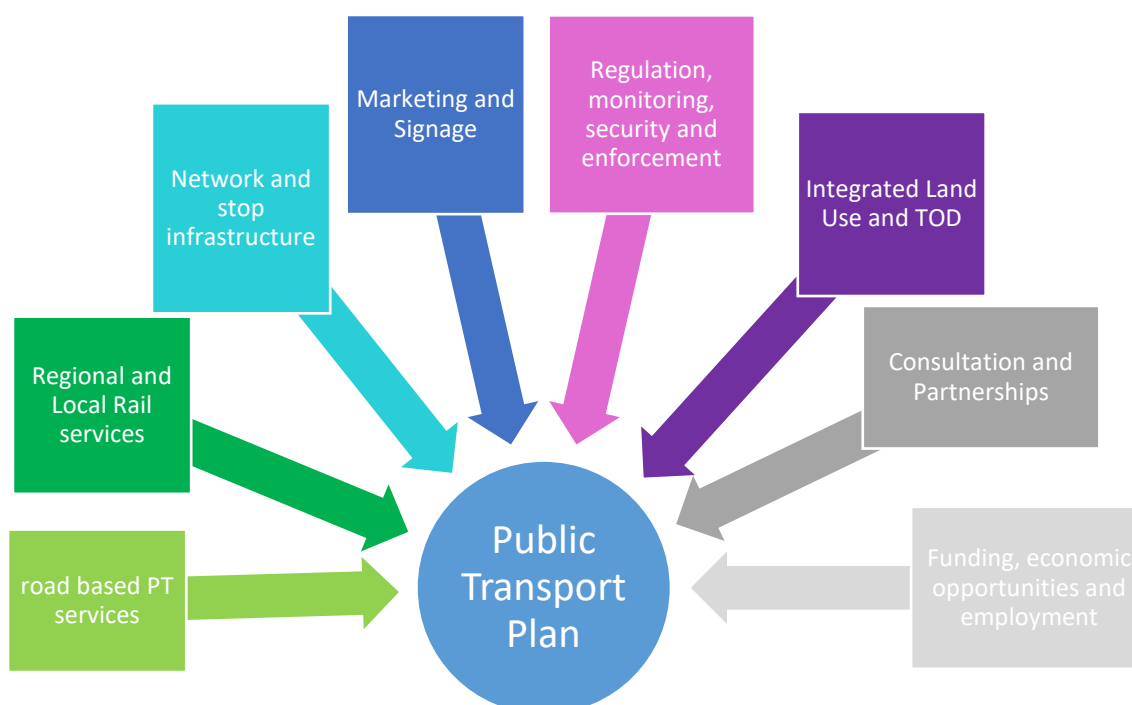
Issue	Description
Poor integration between various public transport modes	<ul style="list-style-type: none"> • Various public transport modes are not well integrated and do not function as a public transport system which work together comprehensively i.e. services, payment methods, infrastructure, transfers, timetables, etc.
Limited access of existing PT services	<ul style="list-style-type: none"> • Particularly limited for national (long distance) and regional (inter-municipal) connections. • Access at local neighbourhood and municipal levels are provided by MBTs and serve mainly specific lower income neighbourhoods. • MBT routes typically end at Bergzicht rank or Stations with no or limited circulation into towns • No airport services
Services concentrated during peak periods	<ul style="list-style-type: none"> • Service frequency is higher service during peak periods • Longer waiting times during off-peak periods and passengers are forced to walk to ranks to access MBT services during off-peak times. • No night services – start operating after 06:00 and before 19:00 • Limited PT transport services to access medical assistance in an emergency after-hours. Usually comes at a higher cost if needed.
No travel time advantage for road based public transport	<ul style="list-style-type: none"> • MBTs which are the road based PT service providers in Stellenbosch are subject to general traffic congestion. • PT offers no travel time advantage and thus there is not incentive to shift from private vehicles. Thus PT serve mainly low income population who are captured riders.
Limited PT infrastructure	<ul style="list-style-type: none"> • Ranks are not used during peak periods which are the busiest times • Passengers are picked up in neighbourhoods where no public transport facilities or shelters are located. • No lighting or well design urban spaces around PT causing safety concerns and discomfort for PT passengers.

Issue	Description
	<ul style="list-style-type: none"> • No formal long distance facility for PT. • Location of existing informal long distance MBT rank makes transfers from local services inconvenient especially with luggage and sometimes long waits.
Rail is unreliable	<ul style="list-style-type: none"> • Rail services have been rapidly deteriorating over the years • It is uncertain and unreliable and it is not expected that PRASA can upgrade the service in the near future. • There are no major upgrades planned for the stations • Stellenbosch and Du Toit Stations are not ideally located. Although there are some proposals to relocate the stations ²¹, it is unclear whether these proposals are feasible from both a funding or space perspectives.
Not universally accessible	<ul style="list-style-type: none"> • Rail stations and trains, as well as minibuss taxis and taxi ranks, cannot accommodate people with special needs, unless they are assisted.

6.2 Building Blocks for a new Public Transport Plan

The figure below lists some of the strategic components that would need to be unpacked further as conceptual building blocks to the public transport system.

Figure 6.1: Strategic Components for Public Transport Plan



²¹ Stellenbosch Municipality, Adam Tas Corridor Study, 2019

Road Based Public Transport

The road based public transport system is a critical leg toward achieving a more sustainable transport system. We would need to actively change the way people think about public transport and improving road based public transport will encourage more people to travel by MBT or bus. Making them more attractive, reliable and competitive will be key.

Although the Municipality has no direct control over MBT and bus service operations it will be imperative to strengthen our partnerships working with MBT associations and operators as well as GABS in order to achieve the following.

- Improved service quality and experience for road based passengers
 - A network of routes that cover main O-Ds for convenient travel without long wait times or long walking distances to access services
 - Punctuality and reliability of services;
 - Affordability;
 - Good service frequencies,
 - Operating hours to suite the needs of users,

Regional and Local Rail Services

Although SM has no direct control over rail operation and investment, we recognise that forging good partnerships with SARCC and other decision makers are critical to influence the outcomes to improve our strategic rail connectivity.

- Lobbying and influencing SARCC to
 - prevent further decline of rail service levels
 - to improve the rail service levels
 - Expand regional access opportunities expanded via rail with good quality services
- Improving station integration with surrounding land-use, using TOD principles and improving accessibility/connectivity to high origin and destination points,
- Provide park and ride as well as kiss and ride options to support the use of rail.

Network and Stop Infrastructure

The extent that the network and stop infrastructure accommodates for public transport is also key to offering a good quality system.

- A prioritised list of network improvements that give genuine priority to road based public transport vehicles is critical to give people a viable alternative compared to the speed and comfort of private transport;
- Good opportunities to interchange between modes through improved infrastructure and access;
- A system of strategically located stops with comfortable shelters will improve the convenience and ease of access for people to use the public transport system;
- Provide park and ride as well as kiss and ride options to support the use of public transport

Marketing and Signage

Promoting public transport to encourage people to use it will require it to have a more positive image.

- Improved customer service and driver behaviour through training;
- Marketing and advertising of public transport services;
- Improved passenger information regarding the available services, arrival times and delays, etc.

In order to move towards a more sustainable transport system it will be essential for SM to improve the road based public transport system. Encouraging more people to travel by MBT or bus it will be necessary to change the way people think about the type of PT modes. Making PT more attractive, reliable and competitive will be key.

- Improved service quality and experience for road based passengers
 - A network of routes that cover main O-Ds for convenient travel without long wait times or long walking distances to access services
 - Punctuality and reliability of services;
 - Affordability;
 - Good service frequencies,
 - Operating hours to suite the needs of users,
- Good opportunities to interchange with other modes through improved infrastructure and access;
- A prioritised list of network improvements that give genuine priority to road based public transport vehicles;
- Improved training, marketing, passenger information to promote a more positive image of road based public transport and encourage use of these more sustainable modes

Regulation, Monitoring, Security and Enforcement

Safety and security is a general concern for the people of Stellenbosch. Lack of safety and security on public transport will definitely discourage people from using the system. SM will need to explore how it can actively include safety, enforcement, regulation and monitoring of the system.

- Improve security particularly at ranks, stops, rail stations and other public transport interchanges;
- Proactively drive the required licenses and regulations required to facilitate public transport routes/operations;
- Monitor the public transport operations and infrastructure quality to maintain standards;
- Enforcement of the system.

Integrated Land Use and TOD

Land use planning plays a critical role in the effectiveness of public transport. Various land uses, such as housing or residential areas, economic activity in business, employment, shopping or industrial centres as well as educational, social and recreational uses, tend to be the generators of travel.

- Improving station and stop integration with surrounding land-use, using TOD principles and improving accessibility/connectivity to high origin and destination points;
- Provide park and ride as well as kiss and ride options to support the use of rail and other modes of public transport;
- Ensure that the residential development have higher densities, mixed development, access to public transport system with a good network of walking and cycling;

Consultation and Partnerships

Although the Municipality has no direct control over Rail, MBT and bus service operations it will be imperative to strengthen the partnerships with these organisations and key decision makers to achieve an improved public transport system.

- Structures are in place to liaise with all operators, associations and decision makers
- Consultation is undertaken to reach consenses on business models for funding and operating the improved public transport system.

Funding, Economic Opportunities and Employment

Lack of funding is a serious challenge limiting public transport improvements. As part of the future planning of the public transport system, financial feasibility and viable funding sources will need to be explored.

Low income levels and high unemployment continues to plague SM. It is essential that mechanisms need to be explored as part of the public transport improvements to address these.

- to unlock economic opportunities
- employment creation opportunities particularly for unemployed youth
- skills training and learnerships

6.3 Public Transport Improvements Recommendations

Table 6.2 summarises some initial recommendations for public transport improvements and possible projects/actions that need to be undertaken to further explore these as possible solutions to improving the public transport system. These cover the following improvement elements.

- Road upgrades or new links to improve regional road based public transport services
- Rail as a means to improve regional and local connections
- Short-term solutions that could be quickly implemented to improve PT customer experience in the interim
- Operational elements that could be implemented for longer term improvements on PT
- Additional services to improve regional road based connections
- Additional services to improve local, intra-municipal or neighbourhood Services (Idas Valley, Cloeteville, Kayamandi, Franschhoek, Klapmuts, Vlottenberg, etc.)
- A local CBD circulation services (Stellenbosch, Franschhoek, Klapmuts) to improve internal access in the centre of main towns in SM.

Table 6.2: Summary of Recommended Public Transport Improvements

Strategic Components	Improvements/Upgrades	Possible Project/ Actions
Regional Road Connections	<ul style="list-style-type: none"> • Strong regional road connections to existing or planned higher order urban settlements (Stellenbosch, Franschhoek, Klapmuts) 	<ul style="list-style-type: none"> • New roads or road upgrades • High capacity arterial which accommodates dedicated road based public transport north and south of CBD
Rail as regional and local connector	<ul style="list-style-type: none"> • Regional and national access improved via rail • Inter-municipal rail services with improved access Paarl, Somerset West, Bellville and Cape Town • Intra-municipal rail movement for local access within SM i.e. between Klapmuts, Muldersvlei, Koelenhof, Du Toit, Stellenbosch, Vlottenburg and Lynedoch • Rail services between Somerset West to Paarl or limited within Stellenbosch Stations 	<ul style="list-style-type: none"> • Lobby PRASA to improve rail services
Short-term	<ul style="list-style-type: none"> • Quality of vehicles 	<ul style="list-style-type: none"> • Driver training programmes

Strategic Components	Improvements/Upgrades	Possible Project/ Actions
	<ul style="list-style-type: none"> • Quality of drivers • Public transport stops (seating, lighting, shelter) for high demand locations 	<ul style="list-style-type: none"> • Prepare a Public Transport Plan • Shelters and stop upgrades • TOD developments around stations and stops
Operational	<ul style="list-style-type: none"> • Use of technology to improve customer experience, ticket purchasing, system monitoring • Scheduling during peak periods and on-demand booking system for off-peak periods, night or emergency needs • Integration between modes and services • New MBT services to expand to to unserved neighbourhoods and new developments • Expanding hours of operation outside peak periods. • Public transport stops (seating, lighting, shelter) for high demand locations 	<ul style="list-style-type: none"> • Prepare a Public Transport Plan • Prepare Operations Plan
Regional Road-Based Services	<ul style="list-style-type: none"> • Frequent or scheduled services for high demand inter-municipal O-Ds (Somerset West, Bellville, Cape Town, Airport, Paarl) • Scheduled services during peak hours with on-demand outside core hours • Access to stations and tows • Booking and payment system using app; also flagging delays • Park and ride areas available with affordable secure parking Infrastructure for comfortable and safe waiting areas 	<ul style="list-style-type: none"> • Next OLP: Investigate need for new services and OLPs required • Prepare Public Transport Plan and investigate elements for improving regional road based services

Strategic Components	Improvements/Upgrades	Possible Project/ Actions
Intra-Municipal or Neighbourhood Services (Idas Valley, Cloetesville, Kayamandi, Franschhoek, Klappmuts, Vloppenbergr, etc.)	<ul style="list-style-type: none"> • Existing restructured routes • Neighbourhood circulation for collection • New routes based on new housing proposals • Core operation time within peak periods • Alternative booking system for services outside peak periods that are perhaps more flexible or on-demand system 	<ul style="list-style-type: none"> • Prepare a Public Transport Plan and investigate new or supplemental routes and alternative booking systems during off-peak
Local CBD Circulation Service (Stellenbosch, Franschhoek, Klappmuts)	<ul style="list-style-type: none"> • Funded by business, university and development contributions • Operated by existing MBT operators and vehicles; but with branding, driver training, vehicle cleanliness, safety and quality specifications • PT routes to provide access from stations and parking garages to CBD and University • Klappmuts – planned with proposed industrial growth 	<ul style="list-style-type: none"> • Local CBD Circulation Plan

6.4 Operating Licences Plan (OLP)

The latest Stellenbosch OLP which was prepared in 2019 has been summarised and included in the 2020 CITP.

One of the key efforts of this OLP was towards simplifying and streamlining SM's MBT route descriptions and route numbers. This was done to make it easier to keep track of MBT routes and the number of active OLs in the municipality. Another key reason for this route rationalisation or restructuring was to facilitate enforcement and to ensure that MBT operators were operating in accordance with their legal authorities.

The revised routes provide unlimited access to MBT operators to collect passengers within residential neighbourhoods which the routes serve. The process of registering these changed routes with the PRE will be undertaken as a priority.

The revised routes together with the correct vehicle registration numbers for vehicles who have authority to operate on the routes, are readily available for traffic law enforcement to be able to easily enforce those vehicles which are illegally operating.

The SDF and the development proposals provide an indication of potential growth in MBT passenger demand over the short, medium and long term. However, the trip generation and modal split per neighbourhood or town is not clear at this stage and this needs to be further explored in order to better understand the actual passenger demand and the number of OLs that would be required in the future.

The routes where potential OLs could be considered include Kayamandi to Stellenbosch, Franschhoek to Paarl, Stellenbosch to Cloeteville and Klapmuts to Paarl.

6.4.1 Number of MBT Operating Licences vs Routes

Table 6.3: Number of Operating Licenses vs Existing Route Authorities Per Taxi Association provides a comparison with the actual number of vehicles with distinct OLs vs route authorities provided by the taxi associations. There are 144 MBT Operating Licences (OLs) with 717 route authorities across the 3 taxi associations in Stellenbosch. There are many cases where operators have registered multiple routes per vehicle on the same OL. Although there are so many route authorities there are actually only much fewer MBT vehicles to provide the service. It makes it difficult to calculate the actual supply of MBT service. The consolidation of route numbers exercise that has been undertaken will simplify this issue significantly.

Table 6.3: Number of Operating Licenses vs Existing Route Authorities Per Taxi Association

	OL/Vehicle Registrations	Route Authorities
Stellenbosch	80	207
Kayamandi	30	342
Franschhoek	34	168
TOTAL	144	717

Source: Taxi Associations OLs, 2019

Due to the lack of accuracy with the various OL databases including the one obtained from the PRE, a decision was made that the most accurate list of OLs would be to obtain directly from the taxi associations. There were numerous stakeholder consultation sessions with the three taxi associations with excellent co-operation from majority of the members. It is noted that there were a few OLs that were not received. It is noted that the total OLs has a small percentage excluded.

6.4.2 Utilisation

Table 6.4 summarises the utilisation of peak hour vehicles. The peak hour per peak day of the week and the average wait time is also indicated. The utilisation is shown as the amount of passengers as a percentage of the service capacity from surveyed vehicle departures. An average vehicle capacity of 15 has been assumed. Most routes show good utilisation.

Table 6.4: Local Routes - Utilisation of Vehicles (Peak Hour)

New Route #	A - Origin	B - Destination	Peak Hour	No of Departures (peak hr)	Service Capacity (peak hr)	No. of Pax (peak hr)	% Utilisation
656	Stellenbosch	Idasvalley	17	49	735	701	95%
662	Stellenbosch	Koelenhof	15	4	60	65	108%
663	Stellenbosch	Vlottenburg/ Lynedoch Station/Devon Valley	16	14	210	208	99%
665	Stellenbosch	Cloeterville	17	75	1125	1121	100%
667	Stellenbosch	Kylemore/ Pniel/ Lanquedoc	16	32	480	479	100%
669	Stellenbosch	Somerset	7	63	945	946	100%
670	Stellenbosch	Jamestown	16	14	210	210	100%
676	Stellenbosch	Kayamandi	7	154	2310	2343	101%
G60	Klapmuts	Muldersvlei	6	24	360	360	100%

Source: survey 2019

Table 6.5: Inter-Municipal Routes - Utilisation of Vehicles (Peak Hour)

New Route number	A - Origin	B - Destination	Peak Hour	No of Departures (peak hr)	Service Capacity (peak hr)	No. of Pax (peak hr)	% Utilisation
755	Franschhoek	Paarl	16	27	405	400	99%
G15	Klapmuts	Paarl	7	20	300	291	97%
G59	Klapmuts	Dandarach Farms Paarl	17	3	45	30	67%
N12	Stellenbosch (DuToit)	Bellville	7	49	735	750	102%

Source: survey 2019

6.4.3 OLP Analysis

Table 6.6 summarises the analysis undertaken per rank and includes the following information:

- Rank Information
 - Rank Number
 - Rank Name
 - Destination (names of areas where routes operate to from that specific rank)
 - Route numbers serving the particular rank
 - No of routes where multiple route numbers serve the same O-D
- Supply
 - Distinct OLs or vehicles with PRE
 - Service Capacity which assumes on average a 15 seater vehicle i.e. vehicle capacity x number of OLs
 - The number of Surveyed Vehicles
 - Legal Vehicles which have an OL and have the right route authority for the rank
- Demand
 - Peak Day
 - Peak Hour
 - No. of Pax (peak hr)
 - Average waiting time (mins)
- Operating Licence Evaluation
 - 1-way route distance [km]
 - Turn-around Time [hh:mm:ss]
 - OLs required based on pax demand
 - Comparison of Capacity from existing OLs registered vs the number of OLs required based on passenger demand
 - Status of illegal vehicles i.e. no OLs with route authorities for that rank
- Recommendation
 - If demand is higher than existing supply, recommend additional OLs
 - If demand is significantly lower than existing supply, recommend no additional OLs

Table 6.6: Operating Licensing Analysis per Route

TA	Local (L)/ Inter-municipal (IM)	New Route number	A - Origin	B - Destination	No of Ols from TA	Service Capacity (1)	Peak Hour	No. of Pax (peak hr)	Route distance (km)	Ave Speed (km/h)	Return Travel Time (min)	Vehicle Trips/hr	OLs Req based on pax	Shortfall or Over	Illegal Vehicles at Rank	Recommendation
Stellenbosch	L	656	Stellenbosch	Idasvalley	17	729	17	701	5.9	35	21	2.86	16.4	1	47%	Adequate
Stellenbosch	L	662	Stellenbosch	Koelenhof	2	46	15	65	24	62	39	1.54	2.8	-1	100%	Adequate
Stellenbosch	L	663	Stellenbosch	Vlottenburg/ Lynedoch Station/Devon Valley	7	450	16	208	10.9	78	14	4.29	3.2	4	30%	Adequate; spare capacity
Stellenbosch	L	665	Stellenbosch	Cloetesville	25	833	17	1121	10.5	38	27	2.22	33.6	-9	56%	Review; possible Ols required
Stellenbosch	L	667	Stellenbosch	Kylemore/ Pniel/ Lanquedoc	17	528	16	479	16.5	57	29	2.07	15.4	2	50%	Adequate
Stellenbosch	L	670	Stellenbosch	Jamestown	10	333	16	210	8.5	31	27	2.22	6.3	4	59%	Adequate
Kayamandi	L	676	Stellenbosch	Kayamandi	22	1165	7	2343	22.6	42	17	3.53	44.3	-22	84%	Review; Ols required
Franschhoek	L	G60	Klapmuts	Muldersvlei	8	424	6	360	8.8	52	17	3.53	6.8	1	95%	Adequate
Franschhoek	IM	755	Franschhoek	Paarl	21	315	16	400	36.3	61	60	1.00	26.7	-6	74%	Review; Ols required
Franschhoek	IM	G15	Klapmuts	Paarl	1	29	7	291	17.4	56	31	1.94	10.0	-9	96%	Review; Ols required

Note:

1 - Service Capacity (Ols x Veh trips hr x avg vehicle size)

L – Local Routes; IM – Inter-Municipal Routes

6.4.4 OLP Outcomes and Recommendations

a) Additional OLs Required

Currently there are only four routes which show a possible need for additional operating licences. These are:

- Route 665 (Stellenbosch to Cloeteville)
- Route 676 (Stellenbosch to Kayamandi)
- Route 755 (Franschhoek to Paarl)
- Route G15 (Klapmuts to Paarl)

In both these cases, there were a very high number of illegal vehicles providing the service.

b) Reduce number of Route Authorities

There were a few routes where the number of OLs were higher than the number of OLs required based on the peak passenger demand. But they never exceeded 5 OLs. The additional trips from growth expected from future proposed development and natural population growth is likely to absorb this.

c) Greater Enforcement of Legal Vehicles

Most routes show a high rate of illegal vehicles but the list below are particularly high. These include vehicles that do not have route authorities at all as well as those that have OLs for Stellenbosch but are on the wrong route. Table 6.7 shows the status of illegal vehicles at the ranks based on vehicles recorded from the survey. It is clear that a greater level of enforcement is required on these routes.

Table 6.7: Illegal Vehicles

New Route #	A - Origin	B - Destination	% of vehicles Illegal (No OL)	% illegal vehicles (Not correct OL for Route)
662	Stellenbosch	Koelenhof	100%	100%
676	Stellenbosch	Kayamandi	74%	84%
G60	Klapmuts	Muldersvlei	90%	95%
755	Franschhoek	Paarl	74%	74%
G15	Klapmuts	Paarl	60%	96%
N12	Stellenbosch (Du Toit)	Bellville	85%	94%
669	Stellenbosch	Somerset	69%	93%

d) Additional OLs in Growth Areas

Previous sections within the Spatial Development Framework describes the housing projections and proposed development. Stellenbosch, Klapmuts and Vloedenburg are promoted as per the SDF as being the focused growth areas in the next 10-20 years.

There is approximately 15 000 dwelling units proposed in the short term i.e. between 1 and 5 year timeframe within Stellenbosch Municipal Area. Since no accurate trip generation or modal split information is available for these areas, some basic assumptions need be made as to the potential

number of trips that could be absorbed by the MBT industry. This would be based on the percentage of that neighbourhood that is likely to use public transport and more specifically MBTs. As an indication for the possible areas that are likely to need additional operating licenses the main growth areas based on the proposed development in the short term (1-5 years) includes:

- Stellenbosch CBD,
- Klapmuts,
- Pniel,
- Idasvalley,
- Cloeteville
- Raithby
- Jamestown

There are no development proposals for Kayamandi and Onderpappergaai areas in the short-term. Growth in Kayamandi is assumed to be from developments in the medium and longer term future.

With the vision for Stellenbosch is one of more sustainable development with higher public transport and NMT trips usage. Thus it is expected that a portion of this demand for travel would need to be accommodated by the MBTs. Thus additional operating licences would need to be provided to accommodate development growth.

e) Modify and Correct Route Descriptions

There were cases where current route descriptions were either incorrectly recorded or due to road improvements are no longer possible e.g. one way or road closures, etc. These route revisions or modifications have been updated and will be submitted to the PRE as part of this OLP process. Signed confirmation for each route revision has been obtained from each operator who has an Operating License for that specific route for each of the taxi associations. This is confirmation that all operators have agreed to the route changes proposed.

f) Deceased Operating Licenses

There are a number of operating licenses whose owners are deceased and it is unclear on how these should be transferred or cancelled. It is essential that the details of these be communicated to the PRE.

7 TRANSPORT INFRASTRUCTURE STRATEGY

The needs assessment, gap identification and vision for transport emphasises that the key areas of implementation for SM must be towards achieving:

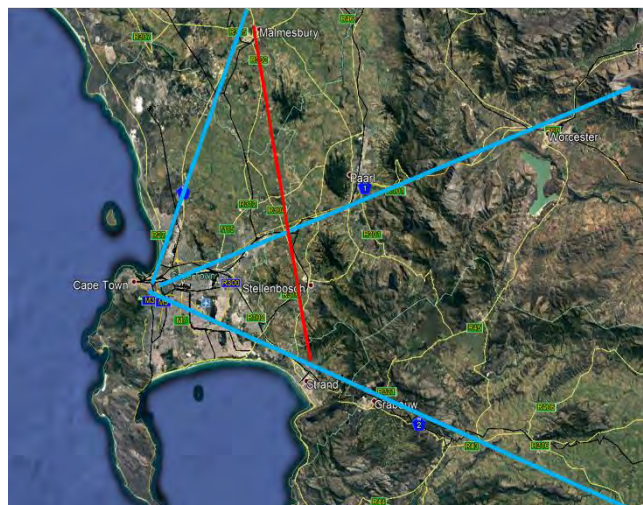
- A well functioning road network with good regional access
- An effective public transport system with good regional access and local public transport
- A walkable and cyclable centre of town

The transport infrastructure strategy deals with the development and maintenance of all types of transport infrastructure, including major roads, public transport facilities, freight corridor measures, non-motorised transport infrastructure, and rail infrastructure. It includes proposals for new facilities and for the improvement of existing public transport facilities and major roads. Only firm schemes earmarked for the next five-year ITP planning period has been included in the strategy. The transport infrastructure strategy will also include measures aimed at realising the goal of making transport in Stellenbosch more sustainable by giving priority to public transport, walking and cycling.

7.1 Road Infrastructure

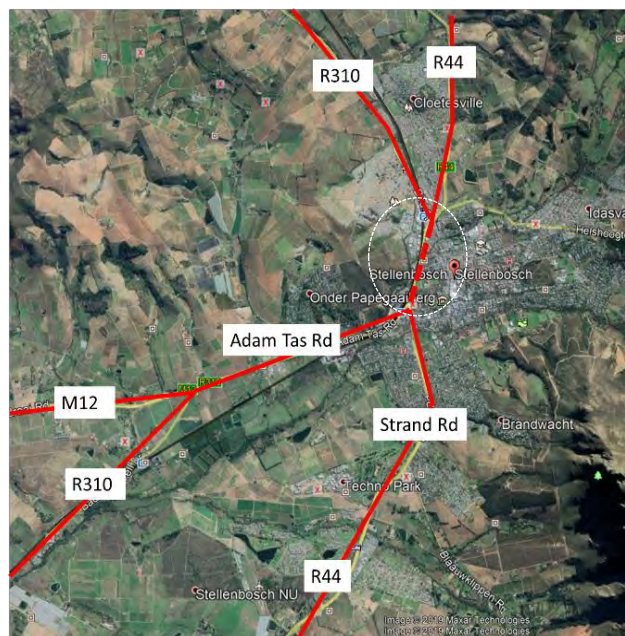
Stellenbosch is a major attraction for developers/developments with its proximity and context to the City of Cape Town, access to an international airport rural agricultural and scenic environment and university. It is also strategically located in the Western Cape Province with traffic from Saldanha, Malmesbury and other parts of the West Coast to the N2 and areas beyond Sir Lowry's Pass. There are also a number of developments planned (see 4.2) e.g. Adam Tas Corridor, Bergsiz, Bergkelder, Spiet, etc. which indicates that Stellenbosch has the potential to double in 10 to 20 years i.e. 5% growth per year. The university also have plans for expansion and growing needs for student housing. There are proposals for converting single residential into higher density student housing. These type of developments and increased densities will place additional pressure on the existing transportation system in particular the regional and local road network. While the the location of the town in the region context means that there will always be a demand for north-south and east-west through (non-local) traffic.

The current road network is at capacity during peak hours for certain links particularly the link Adam Tas/R44 between north (R310 and R44)



Strategic Regional Location of Stellenbosch

Adam Tas Corridor, Bergsiz, Bergkelder, Spiet, etc.



Adam Tas Rd only link between North & South

and east (Adam Tas, M12 and R310) and south (Strand/R44). There is no scope to accommodate any growth in through traffic and more so any increase in land use. This will be the case regardless of any improvements to public transport service and/or making the town more walking/cycling friendly. There is only one regional access linking north and south parts of the Town of Stellenbosch which is via Adam Tas (R44). Existing traffic volumes and congested conditions indicate capacity along this road section is already constrained.

It is essential that the road network be improved with respect to capacity and through access. This is to ensure the 'survival' of Stellenbosch as a "functional town", extra road space must be created in conjunction with the other transport solutions such as an effective public transport system, car-free/less walkable and cyclable areas and strategically locating parking areas to effectively remove vehicles from the car-free areas.

The most important question for Stellenbosch's future is "How to create the required road space" while maintaining the critical and important characteristics of the town, most importantly a friendly walkable/cyclable environment.

Some of the options for network improvements could for example include:

- A Western Bypass
- Extra capacity along Adam Tas Road/Strand Street with additional side ride linkages
- Franschhoek R45 access improvement
- Klapmuts access
- Eastern link (planning and reserving space)

The required road space is a hugely controversial and sensitive issue for many people in Stellenbosch. But it is critical that ways to improve road network access and capacity be explored as a matter of urgency. It needs to be undertaken in a consultative manner, involving citizens as much as possible in the process to find a balanced solution.

7.2 Road Infrastructure Projects

A list of the following road projects was sourced from the latest Roads Masterplan.²²

A concern for ensuring good regional access to ensure the continued viability and growth of Stellenbosch has been identified as a need. The following projects respond to the concern:

- Western Bypass
 - New road between R310 heading north to link with the R304 to tie into the existing intersection with Welgevonden Boulevard. The route runs east of the Stellenbosch land-fill and joins Devon Valley Road for a portion before deviating to pass over the hill
 - Upgrade and extension of Techno Avenue from the R44. Intersections with the R44 and R310 to be grade-separated when required. The road will have limited intersections, and access to Techno Park linking into Neutron Road. The route crosses

²² Stellenbosch Municipality Roads Master Plan, 2019

the Eerste river (new bridge), and passes to the west of Van Ryn's Distillery before crossing the railway line (new bridge) and intersecting with Adam Tas. Detailed planning and investigation of route alternatives will be required and an EIA process due to potentially environmentally sensitive areas

- "Ultimate north-south link between Annandale Road and Adam Tas running to the east of the airport and De Zalze Estate. The route will cross the Eerste River (new bridge) and passes to the west of Van Ryn's Distillery before crossing the railway line (new bridge) and intersecting with Adam Tas.
- Detailed planning and investigation of route alternatives will be required, and an EIA process due to potentially environmentally sensitive areas."
- Dualling of full length of Western Bypass
- Western Bypass / R304 intersection - Upgrade to grade-separated interchange
- Western Bypass / R310 intersection - Upgrade to grade-separated interchange
- Western Bypass / R44 intersection - Upgrade to grade-separated interchange. Possible roundabout to accommodate Techno Park access, proposed new east-west route, and possibly De Zalze access.
- Eastern Boulevard
 - The extension of Wildebosch Road to link onto Techno Avenue at the R44 (Portion of Eastern link)
 - The extension of Wildebosch Road to the north over Trumali Road and in future linking onto Brandwacht, the extension of Van Reede Road and the CBD (Portion of Eastern link)
- R44/Adam Tas Upgrades
 - R44 / Alexander Street / Adam Tas, Intersection upgrade; Realign Alexander Road to form the 4th leg opposite Adam Tas Road southbound
 - R44/R310 between R44 / Helshoogte Road; Intersection upgrade. Provide a left turn slip lane on the R44 southbound, and upgrade Helshoogte westbound to left turn, through and double right turn lanes.
 - R44 / Winery Road, Intersection upgrade. Grade Separation of intersection with free flow on the R44
 - R44 / Annandale Road, Intersection upgrade -Grade Separation of intersection with free flow on the R44
 - Techno Road to Van Reede Road intersections Additional lanesProvisionof additional lanes to increase road link capacity and intersection stop line capacity
 - R 44, Dedicated Public Transport infrastructure. Provision of intersection upgrades and/or dedicated lanes in congested sections
 - New road link to the R44. New road between the existing service road and tying into proposed intersection on the R44. Required as part of the Stellenrust Road realignment. Allows closure of several private driveways along the R44 with a consolidated access road. May require upgrading of the existing gravel service road.
 - Closure of existing unsafe Aerodrome access off the R44"
 - New road link to the R44. Realignment of Stellenrust Road over the R44 to link onto proposed new road and the closure of the existing unsafe access on the R44.
 - R45, Portion of R45 between N1 and Helshoogte Road. Road upgrades and intersection improvements

- R304,
 - Portion of R304 from N1 to R310/R44. Upgrade to dual carriageway.
 - Portion of R304 from R44 to Kyamandi. Upgrade to dual carriageway.

Also a need to improve capacity for access from surrounding towns in SM and into Stellenboach CBD

- R44 upgrades provide regional access but also internal municipal access particularly for public transport dedicated lanes
- M12 & R310 between Stellenbosch Arterial / Polkadraai Road. Public transport infrastructure improvements including intersection upgrades and/or dedicated lanes in congested sections
- Huguenot Road improvements offer better connections to Franchhoek and Pniel
 - Intersection upgrades and potentially a new layout / control type
 - R45 (Huguenot Rd) / Le Roux Street
 - R45 (Huguenot Rd) / La Provence Road
 - R45 (Huguenot Rd) / Uitkyk Street
 - R45 (Huguenot Rd) / Louis Botha Road; Also provide medians on approaches to Huguenot Road / Louis Botha intersection to improve safety.
 - R45 (Huguenot Rd) / Lambrechts Road
 - R45 (Lambrechts Road) / Nerina Street
- Vlaeberg Road. Realignment of road in accordance with the AMP for the R310 with a road over rail bridge
- Bottelary Road. (Bottelary Road / R304 / Devonvale Rd (Blumberg Dr)). Upgrade Bottelary Rd to dual carriageway between Devonvale Road and R304. New roundabout proposed at intersection with Devonvale Road.
- Welgevonden Boulevard. New road between Lang Road and R44. Extension of Welgevonden Boulevard to bypass north of Welgevonden residential area, follow a new alignment and link to the R44 with a signalised intersection. A new entrance to Welgevonden will be required.
- Robertsvlei Road. Upgrade of Robertsvlei Road to accommodate Heavy Vehicles which will allow bypassing of Franschhoek town centre.
- George Balke Road (R44 / George Blake Road / Merriman Avenue). Intersection upgrade and grade separation of George Blake Road over railway line and R44 to link directly to Merriman Avenue. New slips off/onto R44 from new overpass. Signalised.
- Van Reede Road
 - Portion of Van Reede Road to be upgraded/widened and extended to link with Neutron Road that will provide second access to Techno Park.
 - Extension of Van Reede Road to link with proposed new eastern extension of Wildebosch Road. Route runs through potentially sensitive farmlands and although a proclaimed provincial servitude is present, further investigations will be required.
- Suidwal Road. Extension of Suidwal Road between Doornbosch Road to Koch Road. The route is near sensitive areas and requires changes to Bloemhof Girls High School parking area.
- Stellantia Road. Extension of Stellantia Road over the Eerste Rive (new bridge) to link onto Rokewood Road at the eastern Culemborg Crescent intersection. Provides an alternative access from Die Boord to the R310, without using the R44.
- Pastorie Road (Noordwal Wes Rd) link to Suidwal Stree. Pastorie Street link with Suidwal Road over the Eerste River (new bridge required)

- New Class 4 road between the R44 and R101, Klappmuts
- Simonsberg Street between Helshoogte Road / Simonsberg Street. Road upgrade & extension Simonsberg St over the R310 to Main Rd Ext, Johannesburg.
- Sonnestraal Street. Road upgrade & extension
 - Western extension of Sonnestraal Street from the R310 to future Simonsberg Street Ext.
 - Eastern extension of Sonnestraal Street from the R310 to Main Rd Lanquedoc. Eastern extension's access intersections with the R310 LILLO only
- Main Road / Simonsberg Ext. Establish the road reserve for Main Road (Lanquedoc) extension to the south to link to Simonsberg St Extension and Kylemore
- Dirkie Uys Street. Extension of Dirkie Uys Street to connect with La Provence Street - connecting Groendal with Franschoek.
- Nerina Street. New access road from the R45 to existing local access road (OP5618) Extension of Nerina Road from the R45 to Middagkrans Road, Franschoek.
- The Avenue / Suidwal Street. Widening of the existing bridge over the Eerste River to allow two-way traffic.
- Vlottenburg Road. Realignment of Vlottenburg Road to intersect with existing Stellenbosch Kloof Road intersection. This improves safety and reduces the number of intersections and level crossings along Baden Powel. Existing intersection along Baden Powell Drive to be closed.
- Trumali Street. Upgrade of Trumali Street to surfaced carriageway to link with proposed Stern link road road. Provides additional linkages for proposed future developments.
- Future Eastern Link Road (Johannesdal).
- Stellenrust Road - Road upgrade.
- Dorp Street. Upgrade to dual carriageway. Increased capacity from CBD to Adam Tas and northbound traffic on the R44 can access Adam Tas without using the Adam Tas/R44 intersection
- Schuilplaats Rd. Trumali Street / Paradyskloof Road. Extension of Schuilplaats Rd. to link Paradyskloof Rd to Trumali Street. The link will provide a safer alternative access for residents of Paradyskloof to the R44 via the signalised intersection of the R44/Trumali Street. This will also improve overall LOS and safety along this section of the R44.
- Lanquedoc access Rd. Upgrade Lanquedoc access road between R310 & Main Road, including a new bridge adjacent to the existing single carriageway bridge
- Ben du Toit Extension. Trumali Street / Paradyskloof Road. Potential extension of Ben du Toit Street to link Paradyskloof Rd to Trumali St.
- New Jamestown Road. New Jamestown access road linking existing and proposed residential developments south to new Stellenrust Road realignment and north to Blaauwklippen road / Proposed Eastern Link.
- School Road. Upgrade from R44 - pending finalisation of PGWC planned U- turn facility near the R44/School Road intersection
- Pajaro Avenue. Extend Pajaro Avenue northwards to intersect with Blaauwklippen Road and south to Stellenrust Road. Provides link between Jamestown and Paradyskloof.
- Sandringham Road Upgrade to surfaced Road improvement
- Winery Road / Main Street. Macassar Road to Winery Road, extension of Main Road. Realignment of Macassar Road to connect with Winery Road to create improved mobility from

south of the N1. Existing portion of Winery Road to be maintained for local farm access only. Main Road to be extended to meet with new road as a priority intersection.

- Road rehabilitations and regravelling
 - Baden Powell Drive between the M12 Polkadraai and N2. Road rehabilitation and upgrade of Baden Powell between the N2 and Vlaeberg Road. Section between Polkadraai and Annandale Road is planned.
 - Road rehabilitation and provision of new intersections with Eikendal Road, Bredell Road and the R44.
 - R101.
 - M12.
 - Annandale Road.
 - Groenfontein Road. Regravelling of existing road
 - Robertsvlei Road. Regravelling of existing road

A need for new roads as part of new housing developments. The following new roads have been identified.

- Groenfontein Road from R44 to Protea Road. New road extension. Upgrade of Groenfontein Road to serve proposed new developments in Klapmuts (north and south of the N1).
- Jamestown (South) road network; Connect Jamestown (southern areas) to housing developments and Stellenrust Road
- Kyamandi (Northern area) road network
- Botmanskop Road network
- Droedyke road network
- Klapmuts road network

7.3 Public Transport Infrastructure

The quality of the public transport infrastructure is an important factor in a successful public transport system. If public transport is to provide a feasible alternative to private transport a prioritised list of network improvements will need to be put in place which gives genuine priority to road based public transport vehicles. Other public transport infrastructure to include strategically positioned interchanges, comfortable shelters and stations which are well integrated into the urban fabric. The availability of park and rides as well as drop off zones (kiss and ride) facilities also significantly encourage public transport use. In the absence of the public transport plan, the following public transport infrastructure projects are listed, but will need to be revised once the plan has been prepared.

- Kayamandi Taxi Rank
- Franchhoek Taxi Rank - Phase 2
- Klapmuts Taxi Rank - Phase 2
- Long distance MBT Rank - Kayamandi
- MBT Shelters
- Bergzicht Rank Upgrades
- Pound upgrade/ infrastructure

7.4 NMT and cycling Infrastructure

Refer to NMT Plan in Chapter 9.

8 TRAVEL DEMAND STRATEGY

8.1 TDM Overview

Growing congestion and increased travel times are symptoms of a growing demand for travel and increased vehicle ownership particularly during peak periods. Travel Demand Management (TDM) incorporates various initiatives to manage demand for less efficient, single occupancy private vehicle trips.

It is accepted that TDM initiatives to manage private vehicle trips can only be successful if there are good alternative modes of travel. A detailed TDM strategy still needs to be prepared but some components could potentially include:

- Parking management strategies; including park and rides with parking garages constructed outside of the CBD combined with reduced parking and/or increased parking tariffs
- Alternative work from home schemes, staggered start-times or flexible work schedules
- Incident management systems for more efficient handling of incidents to improve emergency response, incident detection, alternative route deviations, etc.

Undertaking transport demand management could offer:

- more active and healthy lifestyles,
- better efficiencies in infrastructure
- reduced environmental impacts of private transport
- support for more sustainable modes of transport such as public transport and Non-Motorised Transport (NMT).

The only way to get people to travel on more sustainable modes of transport is to provide a feasible and attractive alternative to the private typically single occupancy vehicles.

- Improved public transport system including park and ride options
- Network improvements for walking and cycling
- The town and the broader municipality provides for a number of different travel markets,

8.2 TDM Interventions

- Public transport improvements since discretionary users will not consider using it unless it is a viable alternative to the convenience of driving.
- Pedestrian and cycling network. Identify opportunities for “opening up” the urban fabric with a denser network of pedestrian routes, either by negotiating with property owners to make space publicly accessible as a walking route, or by ensuring that future development does not close off opportunities for a better walking network.
- Location of parking outside CBD core to reduce congestion but must be looked with good public transport solutions and combined with a supportive parking pricing. Parking demand should be managed with pricing that is aimed at influencing areas of high demand. Surveys of the Large Employers indicated that around 60% of office workers have access to free parking - a strong incentive to drive to and from work
- Freight transport management. Delivery trucks can have a significant impact on vehicular traffic and contributing to unfriendly environments for pedestrians and cyclists. Designated

and enforced loading zones to discourage practices such as double parking, parking on sidewalks and reversing into traffic. Enforcing delivery times could be introduced where appropriate.

- Large employers and public buildings to consider converting the typical provision of employer parking bays to alternative incentives to encourage use of more sustainable modes e.g. public transport subsidy, bicycle parking or lock-up facilities, showers for employees, flexible work hours and ride-share programmes.
- Speed reductions. Reduced traffic speeds increase safety for pedestrians, particularly at pedestrian crossings and other locations of high pedestrian volumes or where pedestrians are less mobile or confident in traffic (e.g. in wheelchairs, or those who are young or elderly).
- Spatial planning which supports multiple destinations and trip chaining with shorter trips which could be undertaken on foot or by bicycle. The right type of land use mix can serve to reduce the need for travel which is a key factor in TDM.

8.3 List of Projects

Further work is required to prepare a TDM strategy and unpack the various TDM strategies further for implementation. Identifying strategic partners and stakeholders which can support SM to promote TDM campaigns. Some of the suggested projects in the absence of formal TDM planning:

- Prepare TDM Strategy
- Public Transport Plan (also listed in chapter 6)
- Improving walking and cycling network (see chapter 9)
- TOD Plan
- Incorporate TOD principles in future developments
- Parking Strategy
- Plan for Remote Parking Locations (in process)

9 NON-MOTORISED TRANSPORT PLAN

9.1 Walking and Cycling in Stellenbosch currently

Stellenbosch Municipality has adopted a vision towards car-free living and has adopted an approach to encourage public transport, walking and cycling. Some towns in this area, especially Stellenbosch CBD, has a rich culture of walking and cycling and is displayed in the significant amount of walking in the CBD, the public spaces, the street cafes and restaurants. However, this rich urban vibrancy is under threat of being diluted by an ever-increasing dependency on private car usage with streets prioritizing the needs of vehicles over that of pedestrians.

There are many factors that are advantageous for Stellenbosch in ensuring that this culture is retained.

- The historically disadvantaged communities situated on the outside of Stellenbosch (Cloeteville, Khayamandi, Idasvalley) are located well within walkable distances, from the CBD and streams of people can be seen walking to and from the CBD.
- The University of Stellenbosch responsible for the huge student population living in the town and also encourages students to walk between campuses and residences.
- Stellenbosch CBD also has the “old town” that has become the tourist hub and is primarily centred along Dorp Street with many restaurants spilling over into the street, creating a very pedestrian-friendly atmosphere. Similarly, Franschhoek CBD is also very pedestrian-friendly.
- The CBD environment and surrounding residential areas are all within walkable distances with the university, residences, restaurants, shops, offices, located close to one another.
- Stellenbosch Municipality has already implemented various street improvements to calm traffic such as Andringa Street, Victoria Street and the extent to which pedestrians use these streets are prime examples of what can be achieved if the street design of some streets are favoured towards the needs of pedestrians.

However, the roads and streets being used by pedestrians and cyclists are more and more being orientated in favour of vehicles, resulting in unsafe environments for pedestrians and cyclists. Certain focus areas are worth mentioning:

- The pedestrian desire line from Khayamandi to the CBD and Bird Street, across the railway line, is currently the most direct route to get to the CBD. This route is along Rand Street and across the railway line, passing a local shopping hub, a local market, an informal public transport rank at Du Toit Station, making it very desirable. However, the informal crossing of the railway line is unsafe. The alternative route is along the R304, but it is not aligned with the desire line and too far from where people need to be.
- The previously disadvantaged communities on the outskirts of Stellenbosch town ((Cloeteville, Khayamandi, Idasvalley) are located beyond major roads; a typical apartheid spatial planning arrangement. The result is that people walking to town has to cross or walk along significant roads and intersections that due to their function, prioritizes the mobility needs of vehicles. For example, the Adam Tas/ Bird Street intersection, the Helshoogte/ Cluver intersection, the pedestrian desire line from Khayamandi to the schools located in the nearby Cloeteville. People from Jamestown also have to walk along the congested Strand Road/ R44. Similarly, the people in Groendal and La Motte in Franschhoek, Pniel, Klapmuts have to walk along major provincial roads to get to the local towns.
- The CBD is fairly pedestrian-friendly with wide sidewalks along most routes, but walking and cycling is not safe with the ever-increasing traffic and parking in the CBD and the old street

infrastructure with no dropped kerbs are not suitable for people in wheelchairs, people using trolleys, skateboarders and cyclists.

- Cycling is prominent in Stellenbosch but it dominated by recreational cycling. These cyclists typically favours the high-order provincial roads – Stellenbosch Arterial, the R304, Helshoogte Road and the R45 towards Franschhoek. Portions of a cycle network is implemented along certain sections of roads, but there is no coherent cycling network.

An investigation into the potential of cycling in Stellenbosch town²³ indicated that the main barriers to cycling are traffic safety, the lack of cycling infrastructure and personal safety concerns. The Bicycle Plan further also cites access to bicycles as a barrier for people in lower-income communities. However, not only cyclists are faced with significant dangers along their route, but also pedestrians – particularly in Stellenbosch town - as sidewalks tend to be too narrow, lack continuity and are often obstructed (street furniture, parked cars, etc.). Safe crossing opportunities are also of concern. People with special needs are also confronted with a lack of dropped kerbs at crossings as well as a lack of tactile detection guidance surfaces at pedestrian crossings.

The majority of NMT infrastructure investment has taken place in the town of Stellenbosch with limited facilities available in the suburbs located on the outskirts of the town (specifically in and around Kayamandi). Sidewalks make up the majority of existing NMT facilities. Improvements to the NMT network of the local towns of SM area have been carried out but are limited to shared pathways with pedestrians.

A review of the current Stellenbosch Municipal Streets By-law confirms that cyclists and other forms of non-motorised transport users, other than pedestrians, are prevented from using sidewalks. This by-law's regulations are contradictory to the spirit and intent of the IDP's goal of creating a Safe Valley, Green Valley and encourage Dignified Living.

9.2 Overarching Planning Framework

NMT planning in the SM has come a long way, which inter alia includes the SM NMT Master Plans (first prepared in 2009), the NMT Framework prepared by the Cape Winelands District (also 2009), the Cycle Plan for Stellenbosch town (2015)²³, and the University's Transport Plan (2017)²⁴ and SDF (Draft 2020)²⁵. The NMT Masterplan of 2020 presents the consolidated, reviewed and updated network of the NMT Plan²⁶ and the Cycle Plan prepared in 2015. The Provincial

All plans conclude that Stellenbosch Municipality and particularly Stellenbosch town has great potential for cycling due to the town's size, topography, student population and tourist appeal. It also offers a compact, thriving CBD where most commercial and retail needs can be satisfied, a culture of café shops and outdoor dining, which contribute to attractive public spaces for people to relax and explore.

²³ Transport Futures, Cycle Plan for Stellenbosch town, 2015.

²⁴ Stellenbosch University, Integrated Transport Plan, 2017.

²⁵ Stellenbosch University, Draft SDF, 2020.

²⁶ Sturgeon Consulting, NMT Network Plan, 2015.

The University (SU) plays an important role in the uptake of the identified NMT. SU has plans in place to improve the bicycle infrastructure on campus and to align its NMT network with the objectives of the Municipality. The proposals include the pedestrianisation of some of their own private streets and providing slipways for UBER vehicles.

9.3 Vision Statement and Objectives

Certain strategies and policies have to be adopted to arrest the gradual prioritisation of cars over people, to ensure that non-motorised transport users are prioritized in transport planning and street design. Stellenbosch Municipality has adopted the following vision for pedestrians and cycling:

“Stellenbosch Municipality will strive to develop walkable and cycle-able environments that are safe for all to use and contribute to the mobility needs, economic vibrancy and social health of communities.”

This can be translated into the following Strategic Objectives:

- Connect the outlying communities with the CBD in a safe and attractive manner and improve safety, access to opportunities and the dignity of these communities.
- Strive towards car-free living in Stellenbosch CBD.
- Achieve a modal shift in the Stellenbosch CBD towards public transport, walkability and cycle-ability.
- Creating dignified living spaces in previously disadvantaged areas

9.4 Strategies

A set of strategies have been developed for various focus area and along with that, a key principle for the particular focus area have been developed, as well as the lead implementing department/ stakeholder/ Unit. The various focus areas and supporting strategies are listed below in **Error! Reference source not found.**

Table 9.1: Focus areas and supporting strategies

Focus Areas	Strategies
Planning	<ul style="list-style-type: none"> • Encourage and foster an environment of institutional integration • Encourage spatial integration of municipal projects • Encourage the shared implementation of the NMT Network by the public sector and private sector alike.
Human Settlements	<ul style="list-style-type: none"> • Identify and consider non-motorised transport impacts and remedial measures in the process of formulating a Site Development Plan and ensure that NMT and public transport remedial measures are appropriate included in the conditions of approval for Human Settlement developments

Focus Areas	Strategies
	<ul style="list-style-type: none"> • Improve the participation of the municipal transport unit during the evaluation of the Site Development Plan, the TIA and the road designs.
Infrastructure	<ul style="list-style-type: none"> • Connect outlying communities/ neighbourhoods with safe and continuous bike and pedestrian routes • Create pedestrian/ cycle -friendly streets/ pedestrianize in the CBD environments • Create a network of pedestrian and cycle facilities • The public sector and the private sector alike should be encouraged to install bicycle parking facilities. • Develop universally accessible streets • Create space for cyclists and pedestrians along provincial roads in the CBD • Investigate ways and means with the Province to enable cycling along the provincial roads in the municipality • Use various municipal budgets to implement portions of the network • Implementation by other departments and private sector developers • Implement cycle routes in CBDs (cycle lanes and paths (sidewalk or off-street)) • Decluttering of sidewalks • Safe routes to schools
Legal Framework	<ul style="list-style-type: none"> • Align the municipal by-laws for streets with the IDP's strategic focus areas.
Traffic Operations	<ul style="list-style-type: none"> • Reduce traffic in CBD towards creating more liveable environments • Introduce pedestrian-friendly phasing at signalised intersections • Prioritize pedestrian movements around nodal points (schools, public transport facilities, etc) • Prioritize pedestrian and cycle safety at intersections
Transport Systems and Operations	<ul style="list-style-type: none"> • Develop CBD public transport service in Stellenbosch CBD integrated with pedestrian and cycle networks and parking opportunities
Partnerships	<ul style="list-style-type: none"> • Form partnerships/ alliances with key role-players and stakeholders to co-implement the strategy • Approach donor funders for funding for planning, design and implementation.

9.5 Network for Pedestrians and Cyclists

The Status Quo Assessment identified a number of challenges which the updated 2020 NMT Network Plan addresses. In particular, of concern are:

- Fragmented NMT facilities from outlying suburbs to Stellenbosch CBD.
- Encroachment in informal areas which significantly reduces sidewalk space.
- Sidewalk space is also obstructed by uncontrolled parking and cluttering of street furniture.
- Neighbourhoods are often separated by major arterials which are unsafe to cross, especially for learners and the elderly.
- Intersection layouts and operational problems particularly at larger crossing points.

The approach to the development of the NMT Network Plan, and in particular to identifying short-term projects was as follows:

- Review projects identified in the previous NMT & Cycle Plan (2015) and update/ amend as required.
- Incorporate projects identified by the Provincial Sustainable Transport Programme (2018).
- Address pedestrian safety hotspots identified through discussions with officials and in reviewing the Transport Safety Master Plan (2016). Identify locations where pedestrian bridges and safe crossings at railway line and major roads are required.
- Identify the areas with high NMT activity and identify the need to make those areas more NMT friendly and safer. Addressing existing NMT desire lines (upgrade and/or new infrastructure).
- Upgrade current informal links to be weather-resistant and accessible throughout the year.
- Addressing future NMT desire lines (in line with confirmed short-term development initiatives and identified growth nodes in the municipal area as per the SDF).

The overall extent of the proposed NMT network for SM is detailed in Table 9.2. The network proposals are extensive with a total length of 280km.

Table 9.2: Extent of proposed NMT network

	Whole Stellenbosch Municipality Length (km)	Stellenbosch Town (incl. Khayamandi, Jamestown) Length (km)
Proposed Sidewalk	31	11
Class 1 Proposed	26	17
Class 2 Proposed	176	107
Class 3 Proposed	14	14
Class 4 Proposed	32	28
Total (km)	279	176

Note:

1) Cycling in shoulder is excluded from this list.

2) Bicycle Class 2-4 refer to centreline length.

3) Intersection upgrades are excluded from the length summary.

The NMT network is depicted in a series of maps. Refer to Figure 9.1 to Figure 9.6.



Figure 9.1: Stellenbosch Town NMT Network

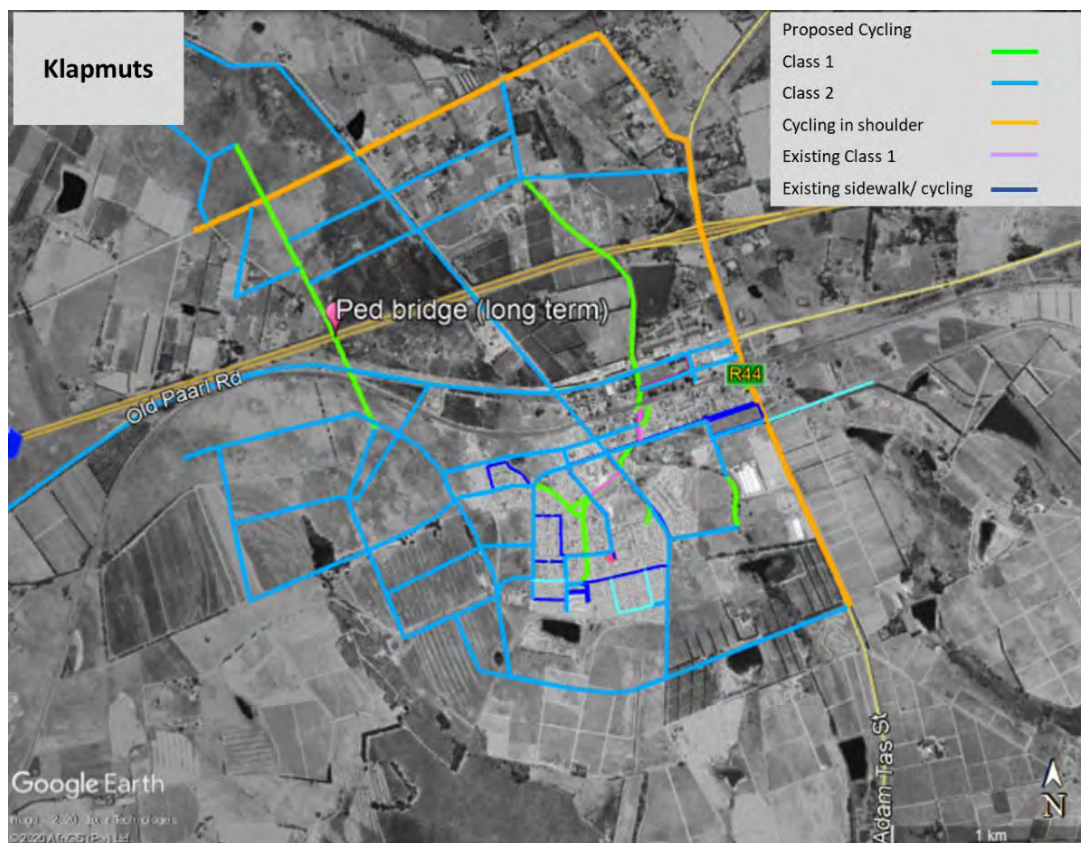


Figure 9.2: Klapmuts NMT Network

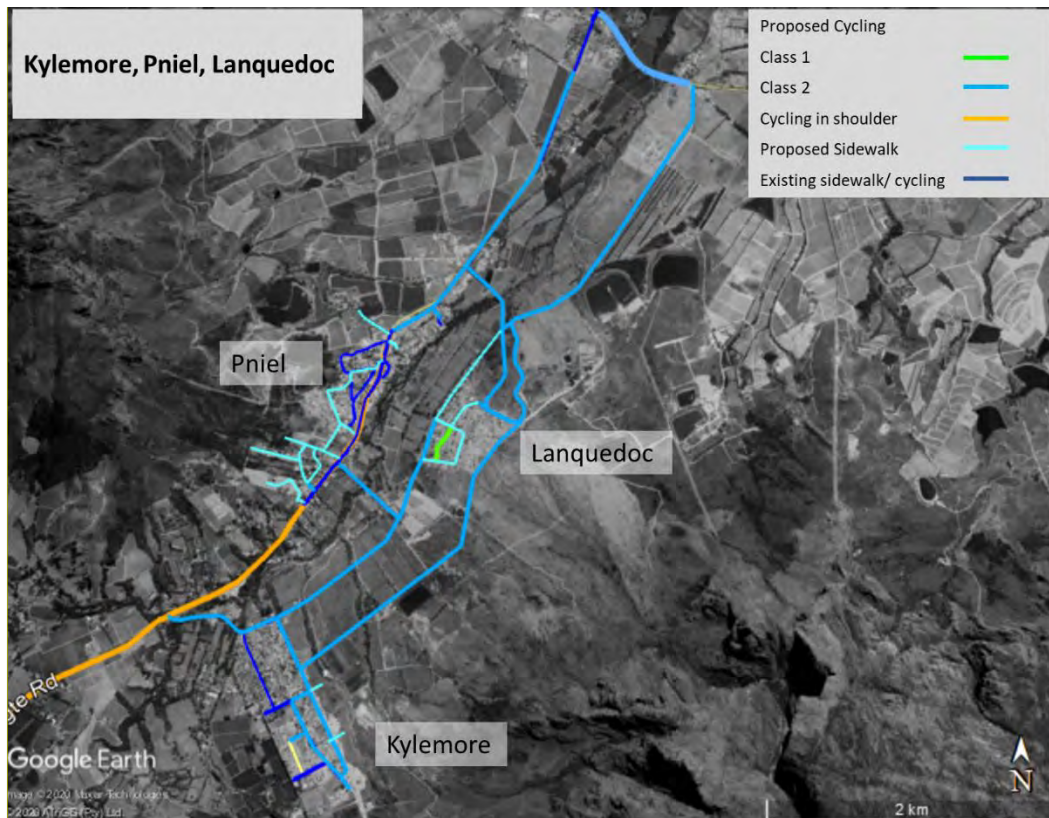


Figure 9.3: Kylemore, Pniel, Lanquedoc NMT Network

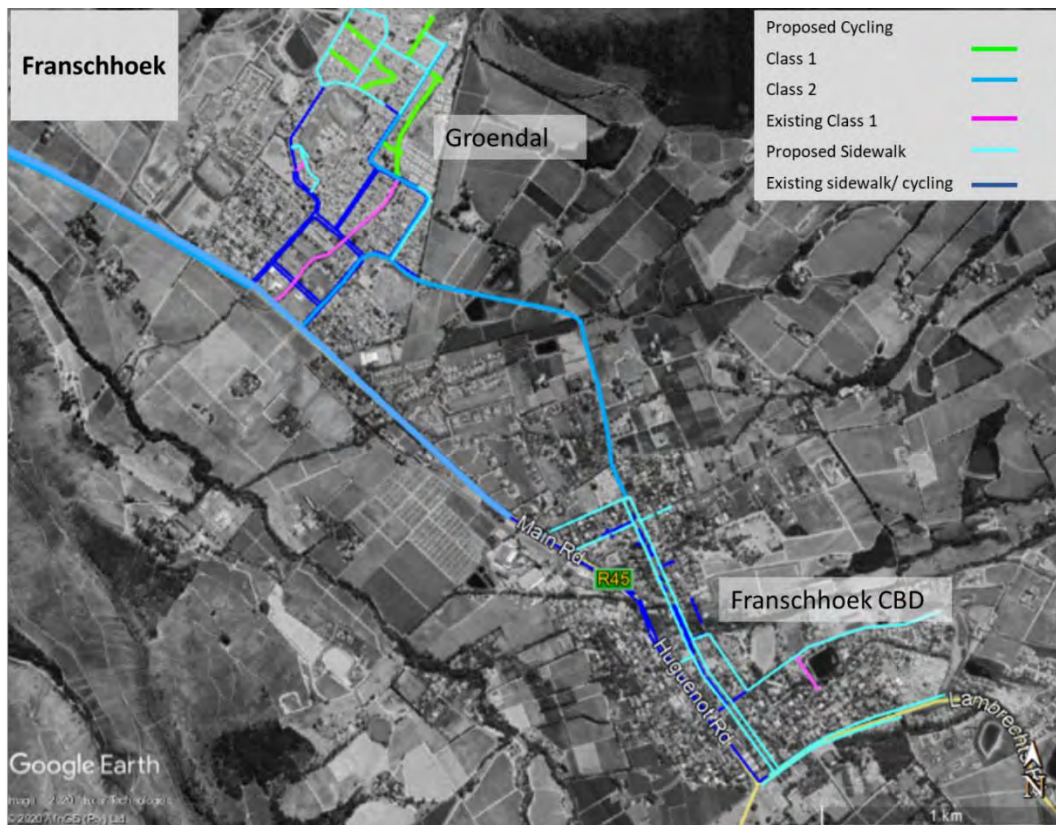


Figure 9.4: Franschhoek NMT Network

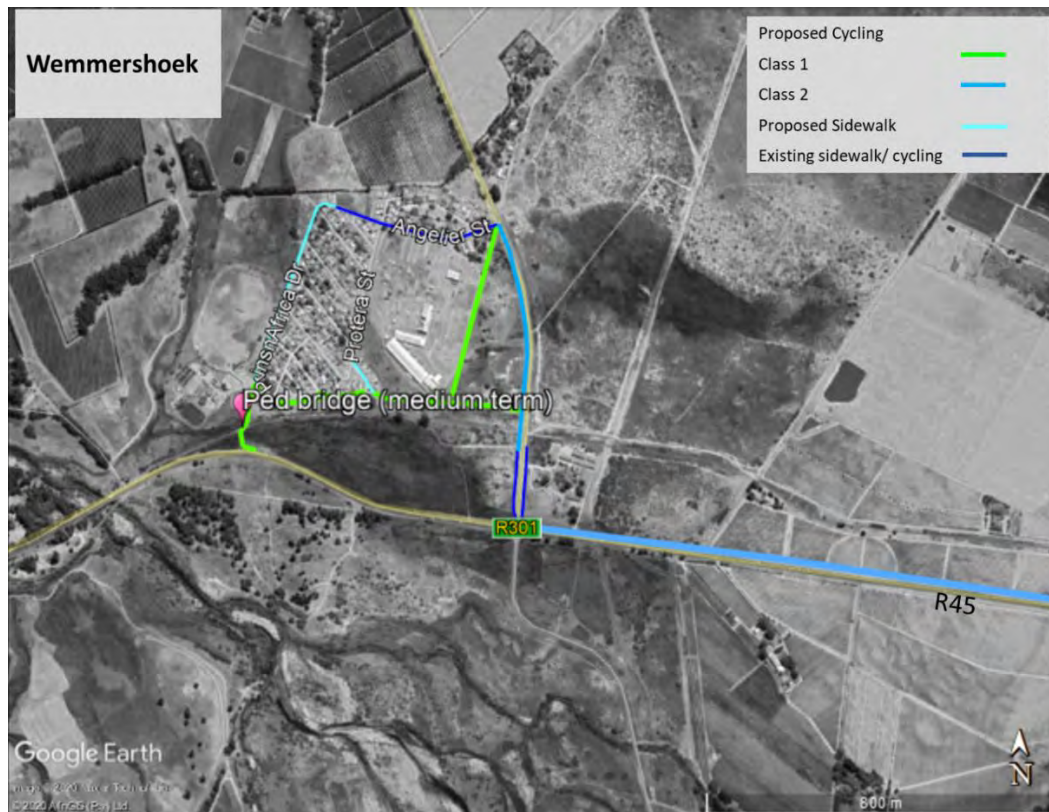


Figure 9.5: Wemmershoek NMT Network

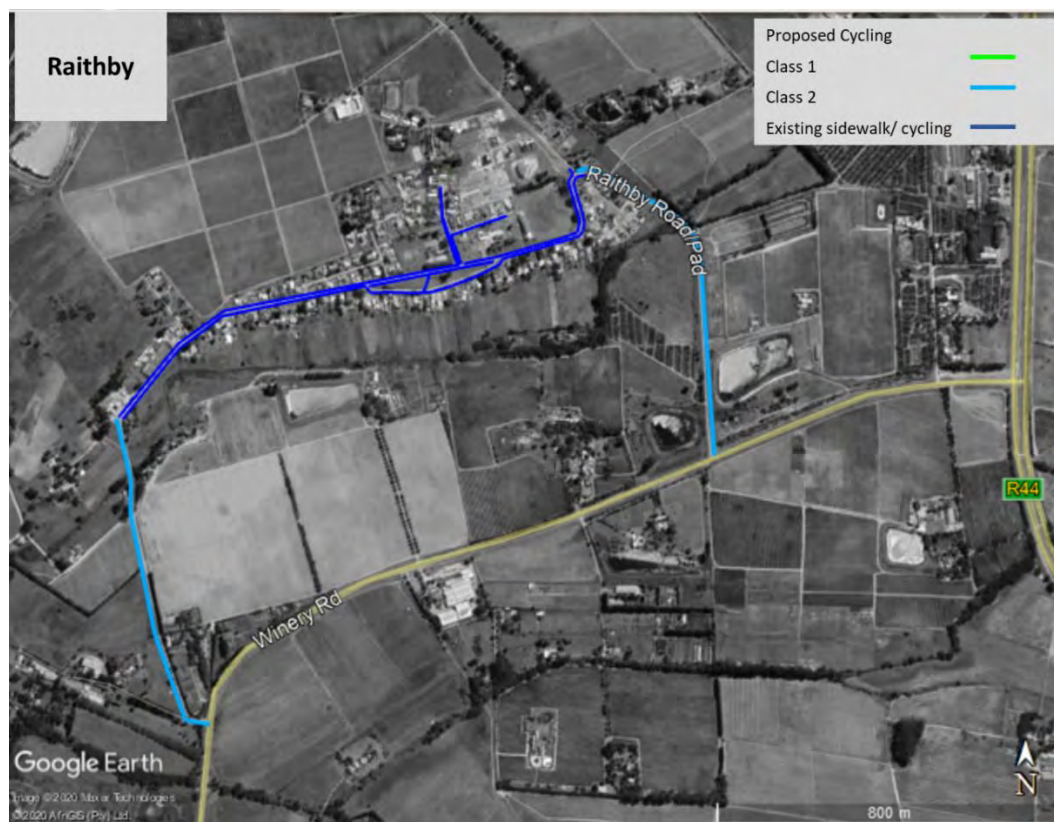


Figure 9.6: Raithby NMT Network

9.6 Priority Projects

Considering the current budget constraints and the likelihood of implementation, only short-term proposals were extracted, and cost estimates prepared. The short-term projects were further refined into (1) High (essential) and (2) Medium (desirable). The extent of the proposed short-term pedestrian and cycle routes amount to 28km (10% of the total network). Refer to Table 9.3. Of that, 70% of the proposed infrastructure is located in the wider Stellenbosch town area. Over time as the portions of the route are implemented, it will ultimately form a coherent NMT Network.

Table 9.3: Extent of proposed NMT Priority Projects

	Whole Stellenbosch Municipality Length (km)	Stellenbosch Town (incl. Khayamandi, Jamestown) Length (km)
Total (km)	279	176
Short-term - Essential	10	7
Short-term - Desirable	18	13
Total short-term	28	20

Note:

1) Cycling in shoulder is excluded from this list.

2) Intersection upgrades are excluded from the length summary.

The NMT Priority Projects include:

- Pedestrianisation of Church St and Andringa St
- Re-cluttering of street furniture in Stellenbosch CBD and dropped kerb standardisation
- Roll-out of bicycle network in Stellenbosch CBD (Continuity of cycle routes, road markings, bi-directional cycling in one way streets, bicycle parking)
- Pedestrian bridge across R304 & rail line linking Kayamandi and Cloeteville
- Kayamandi Rand St: Pedestrian priority, restrict heavy vehicle access, narrow road to 6,5m (from ~9m wide black top), raised ped crossing; Brick pave 4m wide NMT route up to to railway crossing
- Kayamandi: Safe ped link across railway line at Du Toit Station (grade separated crossing; either pedestrian bridge or crossing as part of Kayamandi mall upgrade)
- Kayamandi: Staircases parallel to Rand Rd north-east of stadium
- Kayamandi: Staircases west of stadium and 3m wide footpath up to Rand St (market area)
- Pedestrian bridge across Helshoogte Rd (R310) at Simonsberg St to provide safe crossing for scholars
- Bosman St: Extend effective sidewalk width and provide bi-directional cycle lane (Phase 1 between Banhoek and Merriman, Phase 2 Merriman and Van Riebeeck)
- Soeteweide St: Restrict access to local traffic only and provide safe pedestrian space
- Merriman Ave: Investigation into ped crossing to mitigate current safety concerns
- Merriman Ave: Extension of existing cycle lane up to Adam Tas

- Die Laan: Extend effective sidewalk width and provide bi-directional cycle lane
- R44: Provide 3m wide footpath on western side of the R44 (from Lang Rd to Welegevonden)
- R44: Provide footpath (Extension of Ortell Rd in Cloeteville to the east) and bridge over R44
- Curry Rd: Extend sidewalk space on eastern side by 1) widening existing sidewalk and by 2) reducing drop-off area by installing delineated kerb
- Bloekom St: Improved traffic calming in front of school and extend existing sidewalk
- Extend Bicycle Lane from Cluver Rd along Rustenberg Rd and extend sidewalk where space allows
- Cluver Rd: Provide smooth transition of bicycle lane onto sidewalk space on both sides of the road, widen sidewalk to convert into Bicycle Class 2
- Upgrade NMT route through Eikestad Mall outside parking area; investigate re-arrangement of parking
- Aan die Wagenweg: Upgrade of bicycle path and sidewalk space
- Van Rheede/ R44 Intersection: Improve pedestrian safety
- R44: Provide footpath on eastern side of the R44 (from Doornbosch to Dorp) incl. ped bridge over Eerste River
- R44: Upgrade footpath on eastern side of the R44 (from Paradyskloof to Doornbosch)
- Merriman Ave: Proposed shared footpath on southern side of the road (from Cluver to Simonsberg)
- Simonsberg Rd: Provide shared facility & Implementation of traffic calming measures
- Martinson Rd: Narrowing of road with a separate two-way bicycle facility (4m wide Class 3) on southern side between Omega Rd and Simonsberg Rd; incl. gateways and sidewalk on northern side
- Jonkershoek Rd: Upgrade of shared footpath (widen and resurface southside path where space allows) and provide lighting
- Bird St/ Adam Tas (R44) Intersection: Improve pedestrian safety
- Strand St. R44/ Dorp St Intersection: Improve pedestrian safety
- Adam Tas (R301)/ Dorp St Intersection: Improve pedestrian safety
- Jamestown Webbersvallei Rd: Provide 3m wide shared facility on northern side
- Jamestown Drakensberg Rd: Provide shared NMT Facility
- Koelenhof: Investigation into safe ped crossing at railway line
- Kylemore Swart Rd: Extend existing sidewalk up to Helshoogte Road
- Kylemore Gousblom St: Widen pedestrian space at school entrance
- Kylemore Petunia St: Widen existing sidewalk on southern side, potentially convert into one-way street
- Lanquedoc: Provide shared NMT facility as part of Class 2 as part of the Upgrading of the Lanquedoc Access Road (SRMP078)
- Klappmuts: Shared NMT path along Klappmuts River (off-road)
- Klappmuts Adams St: Widen existing sidewalk on western side
- Klappmuts Alexander St: Widen existing sidewalk and traffic calming measures
- Klappmuts Merchant St: Widen existing sidewalk on eastern side (use full effective width) and convert into shared NMT facility
- Groendal Upper Lea Smit Rd: Upgrade sidewalks and introduce traffic calming

- Groendal Stiebeuel River: Provide shared NMT facility along river on western side from existing NMT path to Dalubuhle school
- Groendal Jafthas St: Sidewalk along Jafthas St from Boonzaaier to Groendal High School (including ped crossing)
- Groendal Davids St: Extend sidewalk by means of delineated kerb
- Groendal: Provide staircase and NMT route from higher lying informal area down to Dalubuhle Primary School
- La Motte Robertsvlei Rd: Provide 3m wide shared facility on western side of Robertsvlei Rd (to be included in SRMP033)
- La Motte Main Rd: Provide pedestrian crossing
- Franschhoek Main Road (R45): Upgrade existing pedestrian crossing points
- Wemmershoek: Rail crossing - Formalise path to PT stop on R45
- Wemmershoek: Formalise footpath on the western side of the R301 up to Wemmershoek access and pedestrian crossing at school access road
- Wemmershoek: Formalise footpath on southern end of Wemmershoek up to school

10 FREIGHT TRANSPORT STRATEGY

10.1 Freight Overview

Freight movement forms a significant portion of trips in Stellenbosch. Freight routes shown entering the Stellenbosch Municipal Area from Cape Town are Bottelary Road (the M23) and Polkadraai Road (the M12). The R44 from north and south of Stellenbosch, the R304 and the R310 west and east, the R101 and the R45 and the R301 in the Franschhoek Valley also carry significant volumes of freight to/from areas within Stellenbosch Municipality. Movement of goods is critical and an effective freight transport within a broader integrated network forms a vital part of Stellenbosch's integrated transport network that will either support or hinder future economic growth. Poor condition and inadequate capacity of key transport infrastructure will have negative impact such as increasing costs and lowering reliability. In the absence of a detailed freight strategy being available for SM, this chapter is a summary notes from the last Stellenbosch CIP (2018) and the Western Cape Freight Study (2019). In February 2012, GIBB prepared the "Cape Winelands District Freight Strategy" which focused on the existing freight movements and facilities within the District. The report notes that the major freight routes close to Stellenbosch town are the connections between Stellenbosch and Somerset West (R44), Stellenbosch and Kuils River (310), Stellenbosch to Klapmuts (R44 north), Stellenbosch to Brackenfell (R304) and Stellenbosch to Franschhoek (R310). The portion of the R45 between Villiersdorp and Paarl is also a major freight route for the region. The report furthermore identifies secondary routes that:

- Provide access to farming areas.
- Carry freight in the form of supplies for agri-processing (e.g. delivery of bottles).
- Distribute the finished product (e.g. delivery of wine) to the Port of Cape Town for export.

The freight system forms an integral part of the transport network. Freight is moved by means of the road network which is managed by SANRAL as provincial and local government and the rail network, pipelines and ports which are managed and operated for the most part by Transnet. The WCG is mandated with the control of overloading of freight vehicles. There are currently 9 weighbridges within the Province, 1 of which is within the Stellenbosch municipal boundary. Overloading is not adequately controlled and there is inadequate legal support for enforcement. In Stellenbosch, the inbound heavy vehicle traffic volume accounts for 1% of the morning peak period of the inbound traffic volumes and is not demanding of the road system capacity. In Franschhoek, approximately 29% of heavy vehicles are through traffic on the main road. Although an alternative heavy vehicle route may alleviate some pressure on the Franschhoek main road, the majority of heavy vehicle traffic is generated in the town and the surrounding farms and will continue to make use of the main road.

10.2 Proposed Projects

- Freight surveys to better understand the extent of heavy vehicles in SM
- Development of a Freight Strategy for SM which includes
 - identification of a strategic freight network
 - Identification of hazardous goods network
 - an infrastructure improvement programme targeted at improved freight movement
 - mechanisms for better law enforcement and overloading control
 - mechanisms for supporting self-regulation

11 OTHER TRANSPORT STRATEGIES

There are a number of other transport strategies that need to be prepared for incorporation into the CITP. These include:

- Law Enforcement Strategy
- Tourism Transport Strategy

11.1 Accessible Transport Strategy

It is important that the transport environment including public transport services and transport infrastructure are accessible for people with special needs, which is typically referred to as “universal access design.”

The National Land Transport Act 2009 requires that people with disabilities are provided for in public transport projects as passengers, along with a wider group of other passengers with special categories of need. The term Passenger with Special Categories of Need (PWSCN) is often used interchangeably with Special Needs Passengers (SNP). However, PWSCN is the term referenced in legislative documents of the Department of Transport.

11.2 Special Categories of Need

The official breakdown for Passengers with Special Categories of Need is listed below:

- **People with disabilities:** defined in the Act as people with a physical, sensory or mental disability; which may be permanent or temporary²⁷.
- **The aged:** or elderly people. People over the age of 55 usually fall in this category. (18% of total population)
- **Pregnant women:** usually taken as women in their last three months of pregnancy.
- **Young children:** this is usually defined as children between the ages of 0-14. (23% of total population)²⁸
- Those who are limited in their movements by children: men and women accompanying young children.
- **Signage passengers:** People who are unable to read or who are unable to understand the language used on the signage. Tourists are also included as signage passengers.
- **Female passengers:** whilst safety and security affects all passenger groups and both genders, it should be noted that female passengers (together with People with Disabilities) are particularly at risk of crime and abuse.
- **Load carrying passengers:** people carrying bags, luggage, or goods of a size that means that they benefit from accessibility features. This is important to people on low incomes in South Africa. People travelling with bicycles are generally also included in this category.

²⁷. This category includes the very young (usually taken as children between the ages of 0-14), and is therefore a broader definition than most other definitions of disability.

²⁸ Information from Statistics South Africa, Census 2011

According to SASSA, there were 1563 people registered for Social Grants²⁹ in Stellenbosch (WC024) as at 17 August 2015. This does not reflect the total number of persons with disabilities since not all people with disability are registered for social grants but it gives a reasonably good indication of the number of disability grants per town.

Table 11.1: List of Disability Grants

Town	Care Dependency	Disability Grant	Grant in Aid	TOTAL
Stellenbosch	47	439	74	560
Franchhoek	45	263	49	357
Klapmuts	34	335	37	406
Pniel	7	103	22	132
Vlottenburg	6	42	4	52
La Motte	4	14	1	19
Lynedoch	2	15	2	19
Jamestown	1	13	4	18
TOTAL	146	1224	193	1563

See Table 11.2 which shows the percentage of population with a particular type of disability. According to the 2010 Census information, 7.9% of SM populations have a type of disability.

Table 11.2: Breakdown of type of difficulty³⁰

Type of Disability	Percentage of Population (%)
Communication Disability	0.4%
Hearling	0.1%
Seeing	0.6%
Self-Care	1.7%
Remembering	0.4%
Walking or Climbing Stairs	0.5%
Walking Stick or Frame	2.3%
Wheelchair	1.9%
TOTAL	7.9%

11.3 Universal Access Improvements and Projects

Universal design is an approach to create an environment that meets the needs of all potential users to the greatest extent possible. Taking into consideration the diverse abilities of individuals, such as agility, balance, cognition, coordination, endurance, flexibility, hearing, problem solving, sensory processing capacity, strength, vision, and walking speed; it emphasises inclusive design that ensures

²⁹ Social African Social Security Agency (SASSA) sourced from the Universal Access Policy Framework for Stellenbosch Municipality, 2018

³⁰ Note that the option was given to choose more than one category of health difficulties.

participation and access for all. In the SM these accommodations or provisions have been limited. Concerns around this include:

- Limited infrastructure provision for people with special needs.
- Public transport vehicles i.e. road based MBTs or buses as well as rail is not specifically tailored to accommodate universal access.
- Some intersections have dropped kerbs and tactile paving, but not all intersections in SM have this treatment.
- Access into buildings are sometimes equipped with ramps for wheelchairs and prams.
- Network of pathways and sidewalks are not comprehensive.

11.4 Universal Access Projects

SM public transport system is unfortunately still far from universally accessible. In the absence of a Universal Access Strategy for Transport, the following list of projects are identified:

- Universal Access Strategy for Transport which defines SM's position of accommodating Special Needs on public transport vehicles, within road, public transport, NMT infrastructure and whether there are any discounted fares or subsidisations to be included.
- Infrastructure improvements such as dropped kerbs on sidewalks with obstructions placed in the centre (e.g. poles) and tactile paving for pedestrians with impaired sight, create difficulties for the user to access the sidewalk.
- Planning of the public transport system and NMT network should incorporate universal access design principles that will assist special categories of passengers to move comfortably from one place to another.

12 FUNDING STRATEGY AND SUMMARY OF PROGRAMMES

12.1 Funding Requirements

Table 12.1 provides a summary of the total budgets estimated to be required for the full list of projects by the various project categories. Project values are shown in **millions of Rands**.

Table 12.1: Project Budget Totals per Category

Project Category	Project Budgets Per FY in Million Rands R'000 000					
	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Integrated Planning	R4.00	R3.80	R5.60	R22.60	R1.70	R37.70
Public Transport	R36.80	R15.25	R27.00	R18.50	R7.50	R105.05
NMT (Walk/Cycle)						R126.30
Road Infrastructure	R25.31	R244.40	R242.40	R758.20	R112.10	R1 382.41
TOTALS (Millions Rands)	R66.11	R263.45	R275.00	R799.30	R121.30	R1 525.16

Note project costs are in Million Rands.

Table 12.2, Table 12.3, Table 12.4 and Table 12.5 summarises the list of projects for SM by type of project category. The list of projects has been sub-divided into the following categories:

- Integrated Planning Projects
- Public Transport Projects
- NMT/Walking and Cycling Projects
- Roads Infrastructure Projects

Projects have been assigned over the next five financial years:

- Years 1 – FY 2020/21
- Year 2 – FY 2021/22
- Year 3 - FY 2022/23
- Year 4 – FY 2023/24
- Year 5 - FY 2024/25.

It also gives an indication of the stage of the projects

- Planning
- Design
- Construction

The priority of projects have also been indicated.

- High – first 1-2 years
- Medium 3-5 years
- Low – beyond 5 years

In addition an indication has been given as to its contribution to the various strategic focus areas listed in the IDP:

- Valley of Possibility
- Green and Sustainable
- Safe Valley
- Dignified Living
- Good Governance and Compliance

The proposed Priority NMT linkages cover 28km and their implementation costs are estimated at approximately R126 million. The list of NMT projects have been costed but not year of implementation allocated yet. Thus for now, only the total budgets for NMT are reflected and not the budgets by financial year.

The project numbering from the Roads Masterplan projects have been carried through.

Also note, that some of the Roads Projects that are still in early planning stages, costs have not been provided for these.

Table 12.2: List of Infrastructure Transport Planning Projects

Project No.	Projects	Financial Year					Type	Funding Source	Strategic Focus Areas						Priority
		Project Budget (Million Rands)							Valley of Possibility	Green and Sustainable	Safe Valley	Dignified Living	Good Governance		
		2020/21	2021/22	2022/23	2023/24	2024/25									
1	Comprehensive Transport Plan (CITP)	R1.00	R1.10	R1.40	R1.30	R1.10	Planning	SM/WCG	✓	✓	✓	✓	✓	High	
a	Overview	R0.30	R0.30	R0.30	R0.30	R0.30	Planning	SM/WCG	✓	✓	✓	✓	✓	High	
b	Public Transport Strategy	R0.70			R0.30		Planning	SM/WCG	✓	✓	✓	✓	✓	High	
c	Transport Demand Management (TDM) Strategy			R0.50			Planning	SM/WCG	✓	✓	✓	✓	✓	High	
d	Freight Strategy		R0.60				Planning	SM/WCG	✓	✓	✓	✓	✓	High	
e	Law Enforcement Strategy		R0.20				Planning	SM	✓	✓	✓	✓	✓	High	
f	Operating Licensing Plan Review (OLP)			R0.30		R0.30	Planning	SM/WCG	✓	✓	✓	✓	✓	High	
g	NMT Strategy			R0.30			Planning	SM/WCG	✓	✓	✓	✓	✓	High	
h	Universal Access Strategy				R0.70		Planning	SM/WCG	✓	✓	✓	✓	✓	High	
2	Update Traffic Model			R0.60			Planning	SM	✓	✓	✓	✓	✓	High	
3	Parking and loading standards guidelines			R0.30			Planning	SM	✓	✓	✓	✓	✓	High	
4	Park and Ride Feasibility Study		R0.60				Planning	SM	✓	✓	✓	✓	✓	High	
5	Road Transport Safety Master Plan			R0.70			Planning	SM	✓	✓	✓	✓	✓	High	
6	Traffic Calming Master Plan			R0.70			Planning	SM	✓	✓	✓	✓	✓	High	
7	New Development Transport Analysis						Planning	SM	✓	✓	✓	✓	✓	High	
8	Du Toit Street Relocation						Planning	SM	✓	✓	✓	✓	✓	TBC	
9	Adam Tas Corridor						Planning	SM	✓	✓	✓	✓	✓	TBC	
10	Parking Development	R1.00	R1.00				Planning	SM	✓	✓	✓	✓	✓	High	
11	Traffic Signal Optimization Programme						Planning	SM	✓	✓	✓	✓	✓	TBC	
12	Kayamandi Extension Transport Network Plan						Planning	SM	✓	✓	✓	✓	✓	TBC	
13	Klapmuts Transport Network Plan						Planning	SM	✓	✓	✓	✓	✓	TBC	
14	Ben du Toit Extension: Trumali Street / Paradyskloof Road			R0.50	R20		Planning	SM	✓	✓	✓	✓	✓	Medium	
15	Jamestown South Transport Network	R1.00					Planning	SM	✓	✓	✓	✓	✓	High	
16	Botmanskop Transport Network						Planning	SM	✓	✓	✓	✓	✓	TBC	
17	Droedyke Transport Network						Planning	SM	✓	✓	✓	✓	✓	TBC	
TOTAL (Rands Per Million)		R4.00	R3.80	R5.60	R22.60	R1.70			✓	✓	✓	✓	✓		

Table 12.3: List of Public Transport Projects

Project No.	Projects	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority
		Project Budget (Million Rands)												
		2020/21	2021/22	2022/23	2023/24	2024/25			Valley of Possibility	Green and Sustainable	Safe Valley	Dignified Living	Good Governance and Compliance	
1	Kayamandi Taxi Rank	R13.00					Construction	SM	✓	✓	✓	✓	✓	High
2	Franchhoek Taxi Rank - Phase 2	R12.00					Construction	SM	✓	✓	✓	✓	✓	High
3	Klapmuts Taxi Rank - Phase 2	R10.00					Construction	SM	✓	✓	✓	✓	✓	High
4	Long distance MBT Rank - Kayamandi		R0.25	R2.00	R6.50	R6.50	Planning, Design and Construction	SM	✓	✓	✓	✓	✓	High
5	MBT Shelters	R0.30	R1.00	R1.00	R1.00	R1.00	Planning, Design and Construction	SM	✓	✓	✓	✓	✓	High
6	Bergzicht Rank Upgrades			R10.00			Planning, Design and Construction	SM	✓	✓	✓	✓	✓	High
7	Pound upgrade/ infrastructure		R3.00	R2.00			Planning, Design and Construction	WCG	✓	✓	✓	✓	✓	TBC
8	Public Transport system Feasibility Study	R1.00	R1.00				Planning	SM, Net	✓	✓	✓	✓	✓	High
9	Businesses Model and Operator Liaison			R1.00	R1.00		Planning	SM, Net	✓	✓	✓	✓	✓	High
10	Short-Term Interventions	R0.50	R5.00	R5.00			Planning, Design and Construction	SM, WCG	✓	✓	✓	✓	✓	High
11	Feasibility of a Transport Operating Company		R2.00				Planning and Investigation	SM	✓	✓	✓	✓	✓	High
12	Public Transport Policy		R1.00				Planning and Investigation	SM	✓	✓	✓	✓	✓	High
13	Re-design of Bergzicht Public Transport Facility		R1.00	R5.00			Planning, Design and Construction	SM	✓	✓	✓	✓	✓	High
14	Tour Bus Parking Stellenbosch/Franschoek		R1.00	R1.00	R10.00		Planning	SM	✓	✓	✓	✓	✓	High
TOTAL (Rands Per Million)		R36.80	R15.25	R27.00	R18.50	R7.50								

Table 12.4: List of NMT (Walking and Cycling) Projects

Project No.	Projects	Total project costs incl fees	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority
			Project Budget (Million Rands)							Valley of Sustainability	Green and Sustainable	Safe Valley	Dignified Living	Good Governance	
			2020/21	2021/22	2022/23	2023/24	2024/25								
1	Pedestrianisation of Church St and Andringa St	R0.49						Planning, Design and Construction	SM	✓	✓	✓		High	
2	Re-cluttering of street furniture in Stellenbosch CBD and dropped kerb standardisation	R5.00						Planning, Design and Construction	SM	✓	✓	✓		Medium	
3	Roll-out of bicycle network in Stellenbosch CBD (Continuity of cycle routes, road markings, bi-directional cycling in one way streets, bicycle parking)	R4.40						Planning, Design and Construction	SM	✓	✓	✓		High	
4	Pedestrian bridge across R304 & rail line linking Kayamandi and Cloeteville	R20.00						Planning, Design and Construction	SM	✓	✓	✓		High	
5	Kayamandi Rand St: Pedestrian priority, restrict heavy vehicle access, narrow road to 6,5m (from ~9m wide black top), raised ped crossing; Brick pave 4m wide NMT route up to to railway crossing	R0.61						Planning, Design and Construction	SM	✓	✓	✓		High	
6	Kayamandi: Safe ped link across railway line at Du Toit Station (grade separated crossing; either pedestrian bridge or crossing as part of Kayamandi mall upgrade)	R8.42						Planning, Design and Construction	SM	✓	✓	✓		High	
7	Kayamandi: Staircases parallel to Rand Rd north-east of stadium	R1.83						Planning, Design and Construction	SM	✓	✓	✓		High	
8	Kayamandi: Staircases west of stadium and 3m wide footpath up to Rand St (market area)	R2.14						Planning, Design and Construction	SM	✓	✓	✓		High	
9	Pedestrian bridge across Heilshoogte Rd (R310) at Simonsberg St to provide safe crossing for scholars	R8.42						Planning, Design and Construction	SM	✓	✓	✓		High	
10	Bosman St: Extend effective sidewalk width and provide bi-directional cycle lane (Phase 1 between Banhoek and Merriman, Phase 2 Merriman and Van Riebeeck)	R0.99						Planning, Design and Construction	SM	✓	✓	✓		High	
11	Soetewide St: Restrict access to local traffic only and provide safe pedestrian space	R0.95						Planning, Design and Construction	SM/ WCG	✓	✓	✓		Medium	
12	Merriman Ave: Investigation into ped crossing to mitigate current safety concerns	R0.62						Planning, Design and Construction	SM/ WCG	✓	✓	✓		High	
13	Merriman Ave: Extension of existing cycle lane up to Adam Tas	R0.10						Planning, Design and Construction	SM	✓	✓	✓		Medium	
14	Die Laan: Extend effective sidewalk width and provide bi-directional cycle lane	R0.49						Planning, Design and Construction	SM	✓	✓	✓		High	
15	R44: Provide 3m wide footpath on western side of the R44 (from Lang Rd to Melegevonden)	R8.00						Planning, Design and Construction	SM/ WCG	✓	✓	✓		Medium	
16	R44: Provide footpath (Extension of Ortel Rd in Cloeteville to the east) and bridge over R44	R9.29						Planning, Design and Construction	SM/ WCG	✓	✓	✓		High	

Project No.	Projects	Total project costs incl fees	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority
			Project Budget (Million Rands)							Valley of Sustainability	Green and Sustainable	Safe Valley	Dignified Living	Good Governance	
			2020/21	2021/22	2022/23	2023/24	2024/25								
17	Curry Rd: Extend sidewalk space on eastern side by 1) widening existing sidewalk and by 2) reducing drop-off area by installing delineated kerb	R0.85						Planning, Design and Construction	SM	✓	✓	✓		High	
18	Bloekom St: Improved traffic calming in front of school and extend existing sidewalk	R0.56						Planning, Design and Construction	SM	✓	✓	✓		High	
19	Extend Bicycle Lane from Cluver Rd along Rustenberg Rd and Cluver Rd: Provide smooth transition of bicycle lane onto sidewalk space on both sides of the road, widen sidewalk to convert into Bicycle Class 2	R1.00						Planning, Design and Construction	SM	✓	✓	✓		Medium	
20		R0.21						Planning, Design and Construction	SM	✓	✓	✓		High	
21	Upgrade NMT route through Eikestad Mall outside parking area; investigate re-arrangement of parking	R0.42						Planning, Design and Construction	SM	✓	✓	✓		Medium	
22	Aan die Wagenweg: Upgrade of bicycle path and sidewalk	R0.89						Planning, Design and Construction	SM	✓	✓	✓		Medium	
23	Van Rheede / R44 Intersection: Improve pedestrian safety	R2.20						Planning, Design and Construction	SM	✓	✓	✓		High	
24	R44: Provide footpath on eastern side of the R44 (from Doornbosch to Dorp) incl. ped bridge over Eerste River	R10.31						Planning, Design and Construction	SM	✓	✓	✓		Medium	
25	R44: Upgrade footpath on eastern side of the R44 (from Paradyskloof to Doornbosch)	R1.22						Planning, Design and Construction	SM	✓	✓	✓		High	
26	Merriman Ave: Proposed shared footpath on southern side of the road (from Cluver to Simonsberg)	R1.05						Planning, Design and Construction	SM	✓	✓	✓		Medium	
27	Simonsberg Rd: Provide shared facility & Implementation of traffic calming measures	R1.22						Planning, Design and Construction	SM	✓	✓	✓		High	
28	Martinson Rd: Narrowing of road with a separate two-way bicycle facility (4m wide Class 3) on southern side between Omega Rd and Simonsberg Rd; incl. gateways and sidewalk on northern side	R2.72						Planning, Design and Construction	SM	✓	✓	✓		Medium	
29	Jonkershoek Rd: Upgrade of shared footpath (widen and resurface southside path where space allows) and provide lighting	R4.87						Planning, Design and Construction	SM/ WCG	✓	✓	✓		Medium	
30	Bird St/ Adam Tas (R44) Intersection: Improve pedestrian safety	R1.65						Planning, Design and Construction	SM/ WCG	✓	✓	✓		High	
31	Strand St. R44/ Dorp St Intersection: Improve pedestrian safety	R1.65						Planning, Design and Construction	SM/ WCG	✓	✓	✓		High	
32	Adam Tas (R301)/ Dorp St Intersection: Improve pedestrian safety	R1.65						Planning, Design and Construction	SM/ WCG	✓	✓	✓		Medium	

Project No.	Projects	Total project costs incl fees	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority	
			Project Budget (Million Rands)							Valley of Sustainability	Green and Sustainable	Safe Valley	Dignified Living	Good Governance		d Compliance
			2020/21	2021/22	2022/23	2023/24	2024/25									
33	Jamestown Webbersvallei Rd: Provide 3m wide shared facility on northern side	R4.65						Planning, Design and Construction	SM	✓	✓	✓		Medium		
34	Jamestown Drakensberg Rd: Provide shared NMT Facility	R0.55						Planning, Design and Construction	SM	✓	✓	✓		Medium		
35	Koelenhof: Investigation into safe ped crossing at railway line	R0.08						Planning	SM	✓	✓	✓		High		
36	Kylemore Swart Rd: Extend existing sidewalk up to Helshoogte Road	R0.12						Planning, Design and Construction	SM	✓	✓	✓		High		
37	Kylemore Gousblom St: Widen pedestrian space at school entrance	R0.15						Planning, Design and Construction	SM	✓	✓	✓		High		
38	Kylemore Petunia St: Widen existing sidewalk on southern side, potentially convert into one-way street	R0.16						Planning, Design and Construction	SM	✓	✓	✓		High		
39	Lanquedoc: Provide shared NMT Facility as part of Class 2 as part of the Upgrading of the Lanquedoc Access Road (SRMP078)	R0.00						Planning, Design and Construction	SM	✓	✓	✓		High		
40	Klapmuts: Shared NMT path along Klapmuts River (off-road)	R1.84						Planning, Design and Construction	SM	✓	✓	✓		High		
41	Klapmuts Adams St: Widen existing sidewalk on western side	R0.43						Planning, Design and Construction	SM	✓	✓	✓		Medium		
42	Klapmuts Alexander St: Widen existing sidewalk and traffic calming measures	R0.83						Planning, Design and Construction	SM	✓	✓	✓		Medium		
43	Klapmuts Merchant St: Widen existing sidewalk on eastern side (use full effective width) and convert into shared NMT facility	R0.75						Planning, Design and Construction	SM	✓	✓	✓		Medium		
44	Groendal Upper Lea Smit Rd: Upgrade sidewalks and introduce traffic calming	R1.07						Planning, Design and Construction	SM	✓	✓	✓		High		
45	Groendal Stiebeuel River: Provide shared NMT facility along river on western side from existing NMT path to Dalubuhle school	R1.84						Planning, Design and Construction	SM	✓	✓	✓		Medium		
46	Groendal Jaffhas St: Sidewalk along Jaffhas St from Boonzaaier to Groendal High School (including ped crossing)	R0.40						Planning, Design and Construction	SM	✓	✓	✓		Medium		
47	Groendal Davids St: Extend sidewalk by means of delineated kerb	R1.01						Planning, Design and Construction	SM	✓	✓	✓		Medium		
48	Groendal: Provide staircase and NMT route from higher lying informal area down to Dalubuhle Primary School	R1.93						Planning, Design and Construction	SM	✓	✓	✓		Medium		

Project No.	Projects	Total project costs incl fees	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority
			Project Budget (Million Rands)												
			2020/21	2021/22	2022/23	2023/24	2024/25			Valley of Sustainability	Green and Sustainable	Safe Valley	Dignified Living	Good Governance	
49	La Motte Robertsvlei Rd: Provide 3m wide shared facility on western side of Robertsvlei Rd (to be included in SRMP033)	R2.94						Planning, Design and Construction	SM	✓	✓	✓	✓	Medium	
50	La Motte Main Rd: Provide pedestrian crossing	R0.02						Planning, Design and Construction	SM	✓	✓	✓	✓	Medium	
51	Franschoek Main Road (R45): Upgrade existing pedestrian crossing points	R0.16						Planning, Design and Construction	SM	✓	✓	✓	✓	Medium	
52	Wemmershoek: Rail crossing - Formalise path to PT stop on R45	R0.33						Planning, Design and Construction	SM	✓	✓	✓	✓	High	
53	Wemmershoek: Formalise footpath on the western side of the R301 up to Wemmershoek access and pedestrian crossing at school access road	R1.60						Planning, Design and Construction	SM	✓	✓	✓	✓	High	
54	Wemmershoek: Formalise footpath on southern end of Wemmershoek up to school	R1.22						Planning, Design and Construction	SM	✓	✓	✓	✓	Medium	
TOTAL (Rands Per Million)		R126.30	R0.00	R0.00	R0.00	R0.00	R0.00								

Note:

Projects 1-34 are located within the wider Stellenbosch town area.

This list includes short-term projects of High (essential) and Medium (desireable) importance.

Costs are Total Project Costs incl. fees. Annual Maintenance to be added.

Funding source to be confirmed.

Table 12.5: List of Roads Infrastructure Projects

Project No.	Projects	Financial Year					Type	Funding Source	Strategic Focus Areas					Priority
		Project Budget (Million Rands)							Valley of Possibility	Green and Sustainable	Safe Valley	Digitified Living	Good Governance and Accountability	
		2020/21	2021/22	2022/23	2023/24	2024/25								
SRMP001	New Link Road between R310 and R304 (Western bypass - Portion north of Adam Tas Road)			R115.40			Feasibility	SM/WCG	✓	✓	✓	✓	Medium	
SRMP002	New Link Road between R44 (Techno Park) and R310 (Adam Tas Road). Western Bypass - interim portion south of the R310.	R1.00	R95.10				Planning	SM/WCG	✓		✓	✓	High	
SRMP003	New road between R44 (near Annandale Road) and R310 (Adam Tas). Western Bypass, ultimate portion south of the R310.						Concept	WCG	✓	✓	✓	✓	TBC	
SRMP004	Kromme Rhee Road						Planning	WCG	✓	✓	✓	✓	Medium	
SRMP006	R44 / Merriman Street		R2.00			R50.30	Planning, Design and Construction	SM	✓	✓	✓	✓	High	
SRMP007	Bottelary Road / R304 / Devonvale Rd (Blumberg Dr)					R33.20	Roundabout completed	SM	✓	✓	✓	✓		
SRMP008	R44 / R310 (Helshoogte Road)						Planning, Design and Construction	SM	✓	✓	✓	✓	High	
SRMP009	R44 / Alexander Street / Adam Tas	R2.00	R1.80	R5.00			Planning, Design	SM	✓	✓	✓	✓	High	
SRMP010	R44 / Winery Road	R2.00	R2.70			R30.00	Planning	WCG	✓	✓	✓	✓	High	
SRMP011	R44 / Annandale Road						Complete	WCG	✓	✓	✓	✓		
SRMP012	R45 (Huguenot Rd) / Le Roux Street						Planning, Design and Construction	SM	✓	✓	✓	✓	High	
SRMP013	R45 (Huguenot Rd) / La Provence Road	R1.00	R1.00	R10.00			Planning	SM	✓	✓	✓	✓	TBC	
SRMP014	R45 (Huguenot Rd) / Uitkyk Street						Planning	SM	✓	✓	✓	✓	TBC	
SRMP015	R45 (Huguenot Rd) / Louis Botha Road						Planning	SM	✓	✓	✓	✓	TBC	
SRMP016	R45 (Huguenot Rd) / Lambrechts Road						Planning	SM	✓	✓	✓	✓	TBC	
SRMP017	R45 (Lambrechts Road) / Nerina Street						Planning	SM	✓	✓	✓	✓	TBC	

[illegible]

[illegible]

13 STAKEHOLDER CONSULTATION

The overall aim of the consultation process is to ensure that relevant stakeholders have adequate opportunity to provide input into the concept development process. Consultation for this project will be undertaken at various levels; Project Team Meetings and identified role-players and stakeholders.

In addition, in an attempt to develop a better understanding various key interactions was be held with relevant role-players. These included:

- Workshop with Stellenbosch planners
- Workshop with CWDm around public transport plans and strategies
- Workshop with Western Cape Dept. of Transport and Public Works around roads masterplanning

13.1 Stakeholders consulted

Stakeholder engagements were undertaken with SLM officials and are discussed hereafter.

13.1.1 Municipal Officials

A Project Steering Committee was established with representatives of the Client and other agreed upon municipal stakeholders. Meetings was held in accordance with key milestones and project progress and project management matters were presented and discussed.

Engagements with officials from SLM were undertaken through the established project team. These meetings were used to obtain detailed information to assist with sourcing planning and policy documents, reaching consensus on the vision and transport chapters of the CIP.

13.1.2 Provincial Department of Transport and Public Works

The PRE provided vehicle registration, owner information and permit information which formed the base source of information as part of the OLP and TR.

Various meetings wer held with the provincial government units i.e. Regulation and Transport Registrar to consult on route rationalisation as well as updating the route numbers and descriptions on the provincial operating licensing database.

13.1.3 Liaison with Taxi Associations

Liaison with the local taxi associations was considered to be a vital aspect of preparing the TR and OLP which are direct input into the CIP. Engagement with the various taxi associations within SM was undertaken at various stages of the project including:

- prior to the commencement of the data collection surveys to confirm MBT operations, the location of ranks and description of routes
- after surveys were completed to present findings
- verification of operating license information as well as the
- ratification of consolidated route numbers and new route descriptions.

The survey staff encountered no difficulties in executing fieldwork and all the taxi associations gave their full corporation during the surveys and project. Each member signed against the route modifications confirming their agreement. There are 3 taxi associations that are active in SM which include:

4. Stellenbosch Taxi Association
5. Franschhoek Taxi Association
6. Kayamandi Taxi Association

13.1.4 Public Consultation as part of IDP Process

Individual ward meetings were held in October 2019 to determine the needs of the community that need to be addressed to improve the quality of life of residents in the greater Stellenbosch area. Information about the schedule of IDP/Budget Public Engagement Meetings in October 2018 were communicated both internally and externally. Internal communication was sent to management, Councillors, the Executive Mayoral Committee, Council and all officials within the Municipality. External communication about the meetings taking place was done through advertising in the main local newspaper as well as the community newspaper distributed free of charge. The schedule and advertisement was also published on the Municipality's official website, social media, distributed as flyers, loudhailed in the suburbs and SMS cellular phone messaging. The Municipality provided transport to members of the public who wished to attend the public engagements.

A summary of the concerns and issues raised by the public was recorded. These inputs have been incorporated into the needs assessment and the project responses.

14 WAY FORWARD

Typically the CIP is updated annually with a full review required every 5 years. It is recommended that the next series of updates and reviews focus on the outstanding sector plans required to comprehensively update these chapters in the CIP report. These chapters in order of priority are as follows:

- Short Term Years 1-2
 - Public Transport Plan
 - Freight Strategy
 - Law Enforcement Strategy
 - Universal Access Strategy
- Medium Term Years 3-5
 - Travel Demand Strategy
 - NMT (Cycling and Walking) Plan Review
 - E-Hailing Strategy
 - Tourism Transport Strategy
 - Transport Register and OLP Review

**Annexure A: SUMMARY REVIEW
OF INTERNATIONAL UNIVERSITY
TOWN CASE STUDIES**

INSERT SLIDES OF CASE STUDIES

**Annexure B: MBT ROUTE ROUTE
DESCRIPTIONS IN
STELLENBOSCH MUNICIPALITY
(new routes 2019)**

Revised Descriptions and Conditions for Local Routes in Stellenbosch Municipality

New Route Number	Route Name	New Route Description	Conditions of Route Authority
656	Idasvalley - Stellenbosch	Collection within boundaries of Idasvalley neighbourhood, use either Rustenburg Rd or Lelie St to exit Idasvalley. Continue to Bergzicht Rank via either Cluver Rd onto Merriman Ave, Banhoek Rd or Hamanshand Rd to Bergzicht Rank. Return to Idasvalley neighborhood via the same route.	<ul style="list-style-type: none"> • Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route or in Idasvalley neighbourhood. • Also subject to time conditions above additional destinations can be served: Stellenbosch Station, Stellenbosch Hospital, Plankenburg/Devonvalley Industrial area and the neighbourhoods (Die Boord, Dalsig, Universiteits Oord, Dennesig, Krigeville, Karindal, Uniepark, Simonswyk and Onderpappagaaiberg.
665	Cloetesville - Stellenbosch	Collection within boundaries of Cloetesville, La Colline and Prinspark neighbourhoods, use Hendrikse Rd, Fir Rd, Short St, Langsstraat Suid Rd, Bell Rd or La Colline Rd to exit the neighbourhoods; Continue to Bergzicht Rank via either Bird Str or Adam Tas (R44) to Bergzicht Rank. Return to Cloetesville via the same route.	<ul style="list-style-type: none"> • Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route or in Cloetesville, La Colline and Prinspark neighborhoods. After 15:40 allowed to utilise Hofman Str onto Molteno Rd and Pappagaairand Rd onto Bird St.
638	Jamestown - Stellenbosch	Collection within the boundaries of Jamestown neighbourhood, using R44 with drop-off in Paradyskloof (via Blauwklippen Rd or Paradyskloof Rd) and Technopark (via Tegno Rd), continue to Bergzicht Rank via Merriman Str or Dorp Str via Pappegaai Rd onto Du Toit Str into Merriman Str. Return to Jamestown along same route.	<ul style="list-style-type: none"> • Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route or in Jamestown and Paradyskloof

New Route Number	Route Name	New Route Description	Conditions of Route Authority
			neighbourhoods or Technopark <ul style="list-style-type: none"> Also subject to time conditions above additional destinations can be served: Stellenbosch Station
662	Stellenbosch - Koelenhof	From Bergzicht Rank via Bird Str or Adam Tas (R44) continue on R304 to Koelenhof with a turnaround at Koelenhof Station, or Devonvale Circle on Bottelary Rd or Die Trekker on the R304	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
663	Stellenbosch - Vlottenburg /Devon Valley	From Bergzicht Rank via Merriman Str, left on R44, right in Adam Tas Rd onto Polkadraai Rd, either left onto Vlottenburg Rd or direct onto R310 (Baden Powell) and right on Vlaeburg Rd back onto Polkadraai Rd upto the Stellenbosch Kloof Rd deadend and turn around. Return via Adam Tas and Merriman to Bergzicht Taxi Rank. Also serve Devon Valley via right in Adam Tas Rd right at the Distell intersection continue to Onder Papegaaiberg area back onto Devonvalley Rd upto JC. Return via same routes.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
667	Stellenbosch - Kylemore/ Pniel/ Lanquedoc	From Bergzicht Rank via Merriman Str, left into Cluwer, right onto Helshoogte Rd to serve Kylemore, Pniel and Lanquedoc. Return to Bergzicht Taxi Rank via Merriman Str or Hamanshand Rd/Banhoeck Rd/ Universityds Oord.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
675	Stellenbosch - Jonkershoek	From Bergzicht Rank via Merriman Str onto Martinson Str until Jonkershoek. Return via same route to Bergzicht Taxi Route.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
673	Stellenbosch- Elsenburg	From Bergzicht Rank via Bird or R44, right onto Knorhoek Rd upto Delheim Farm and back to R44, left in Elsenburg Rd into Muldersvlei to Vaal Draai. Return via same route to Bergzicht Taxi Route.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route

New Route Number	Route Name	New Route Description	Conditions of Route Authority
676	Stellenbosch - Kayamandi	Kayamandi neighbourhood via Kayamandi Rank onto Masitandane Rd onto George Blake Rd left at R44 right into Merriman or via Bird, right at Merriman and left into Bergzicht Rank.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route or in Kayamandi neighbourhood
A96	Franschhoek - Franschhoek Plase	From Pick 'n Pay in Main Road Right at the Hugenote Monument, in Excelsior Road to Mountain manor, Boekenhoutskloof, La Daupine, Bergsig Delmonte packers, Green Valley farm, & Middagkrans and back as follows: Champagne Farm, La Bri, Robertsvlei, Dewdale, waterworks over Safcol, right in R45, left in Le Roux street, over Boonzaaier street, left in school street, right in Provance street, Right in R45 until collection Point at Pick'n Pay Franscchoek.	
G60	Klapmuts-via Muldersvlei - Stellenbosch	Collection within the boundaries of Klapmuts, right into R44 up to Stellenbosch, or right into Elsenburg Rd and Muldersvlei Rd to Muldersvlei Station, then to Stellenbosch left into Bird street, right into Merriman avenue, left into R44 and right at Adam Tas road, to Stellenbosch Station and back with R44 or via Muldersvlei right into R101, back to Klapmuts Area.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Stellenbosch Station except between the hours of 19:00 and 09:00 unless at authorised collection areas and drop off points along the route.
G61	Klapmuts - Simondium	Collection within the boundaries of Klapmuts, to Klapmuts taxi rank then to the R44 straight onto Main road 205 Simondium/Klapmuts road right into R45 upto Simondium Hotel and back with the R45 via the same route to Klapmuts Taxi Rank.	
Y48	Stellenbosch-R310	Route Description From Taxi Rank at Bergzicht Stellenbosch, left into Bird Street, left into Merriman Avenue, left into Adam Tas Road, onto the R44, right into Techno Park. From Techno Park, right onto the R44, into Annandale Road, left onto the R310 (Baden Powell Drive) until Stellenbosch WC024 Border, back onto the R310 (Baden Powell Drive), right into Annandale Road, left onto the R44, left into Techno Park. From Techno Park, left onto the R44 and the surrounding suburbs namely; Paradyskloof, Onder Papegaaiberg, Die Boord, Dalsig, Krigeville, Karindal, Uniepark, Simonswyk, Plakenberg, Industrial Area and Devon Valley Industrial Area to Taxi Rank at Bergzicht Stellenbosch.	<ul style="list-style-type: none"> Passengers may only be picked-up at Bergzicht taxi rank and no passengers to embark on the R44 until Bergzicht Rank is reached. Passengers can only disembark on the forward journey from Bergzicht taxi rank. Passengers can only embark at De Zalze with the return journey to Stellenbosch. Passengers can only embark at spier on the R310 (Baden

New Route Number	Route Name	New Route Description	Conditions of Route Authority
			<p>Powell Drive) with the return journey to Stellenbosch.</p> <ul style="list-style-type: none"> • No passengers to embark or disembark on the forward and return journeys
Z47	Franschhoek - Stellenbosch	<p>From Taxi Facility in Groendal Franschhoek, onto the R45 until Groot Drakenstein, left into Helshoogte road R310 to Stellenbosch turn, left at Cluver until Traffic Circle right into Merriman Avenue right at Stellenbosch Hospital. From Stellenbosch Hospital right into Merriman avenue until R44, left into R44 and Right into Adam Tas to Stellenbosch Station and return along the same route.</p>	<ul style="list-style-type: none"> • Passengers must at all times embark and disembark at Stellenbosch Station except between the hours of 19:00 and 09:00 unless at authorised collection areas and drop off points along the route.

Revised Descriptions and Conditions for Inter-Municipal Routes in Stellenbosch Municipality

New Route Number	Route Name	New Route Description	Conditions of Route Authority
669	Stellenbosch - Somerset West	<p>From Bergzicht Rank left into Merriman, left into R44, or left into Du Toit onto Pappegaai Rd and right into Dorp and left into R44 onto Main Rd Somerset West right into Church Street or via Upper Orange Str to Somerset West PTI. Return via same route to Bergzicht Taxi Route.</p>	<ul style="list-style-type: none"> • Passengers must at all times embark and disembark at Bergzicht Taxi Rank except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route. • Passengers can only embark and disembark with the forward journey to Somerset - West from webers Valley and R44 Intersection, and with the return journey from Somerset - West, passengers can embark and disembark until the Old Valley Road (Jamestown Cemetary). From the Old Valley Road (Jamestown Cemetary) with the return journey from Somerset West, passengers can only disembark on route to Bergzicht Taxi Rank.

New Route Number	Route Name	New Route Description	Conditions of Route Authority
755	Franschhoek - Paarl	Collection within boundaries of Franschhoek Area, onto the R45 Turn Right at the Wemmershoek School onto R301 upto the traffic circle in Paarl, left into Mark Street up to next Traffic circle, right in to Bergriver Boulevard, left in Van der Lingen Street to Shoprite Paarl or Via Groot Drakenstein, Simondium, Corrobrick , Right into Old Paarl road , right into Pine Street, left into Tabak Street , right into Louw Street and Left into Railway street , Left Station road Right into Hattford Street right into Mainroad , right into Van der Lingen or right into Bergriver Boulevard to Shoprite Paarl Taxi rank and back via the same route.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Franschhoek and Shoprite Paarl Taxi Ranks except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
A88	Stellenbosch - Kuilsrivier	From Bergzicht Taxi Rank left into Bird Street onto the R304 past Kayamandi, left into Bottelary Rd, left into La Belle Rd, left in Van Riebeeckweg, right into Carinus str, right in Kuilsrivier Taxi Rank. Return via the same route.	
G15	Klapmuts - Paarl	Collection within boundaries of Klapmuts neighbourhood, onto Merchant Street, left in the R44, right in R101 Old Paarl road, right into Pine Street, left into Tabak Street, right into Louw Street and Left into Railway Street, Left Station road Right into Hattford Street right into Main road, right into Van der Lingen or right into Bergriver Boulevard to Shoprite Paarl Taxi rank and back via the same route.	
G59	Klapmuts-Dandarach Farms Paarl	Collection within boundaries of Klapmuts Area, left in the R44 until Windmeul, left with Vryguns Road, right with Voor Paardenberg road until Dandarach Farm, Paarl. From dandarach right with Voor Paardenberg road, left with Vryguns roqad, right into R44, left into Suid Agter Paarl road, right with R101 to Klapmuts Station.	
N12	Stellenbosch Du Toit –Bellville	From Du Toit Long Distance Rank, left into bird Str, onto the Koelenhof Rd, left into Bottelary Rd, left into La Belle Rd, right into Strand Rd, straight into Voortrekker Rd, after the Stikland bridge, left and right into Rail Road to Bellville taxi rank, and back on the same route, except on the return journey on the Koelenhof Road, turn right by costa land to Kayamandi, and back into Bird Str to Du Toit Rank.	<ul style="list-style-type: none"> no passengers shall embark at any other taxi rank in the wc024 stellenbosch area. no passengers shall embark or disembark with the forward and return journey except at Du Toit Rank with the return journey passengers will only disembark at Kayamandi.

New Route Number	Route Name	New Route Description	Conditions of Route Authority
N42	Franschhoek - Paarl Mall	From Pick 'n Pay in Main Road Franschhoek, along the R45 upto the R101 right onto the R101, right at the N1 on-ramp left at the N1 off ramp to the mall, left at Aboretum Road until traffic circle, left at entrance of the Mall to collection point, from collection point, left with Jones Street, right with new Vleis street, left into Pine Street, left with Paarl main road, left onto R45 to Pick n Pay in main road Franschhoek.	<ul style="list-style-type: none"> Passengers must at all times embark and disembark at Franschhoek and Shoprite Paarl Taxi Ranks except between the hours of 19:00 and 09:00 unless at designated pick-up and drop off points along the route
Q80	Kayamandi-Lwandile	From kayamandi into George Blake Avenue, right into adam tas road onto the r44, left into m9 main road, somerset west, right into caledon road, left onto the n2 to lwandle and back on the same route.	