

Western Cape Government Provincial Treasury

Socio-economic Profile Stellenbosch Municipality

2015

Working Paper

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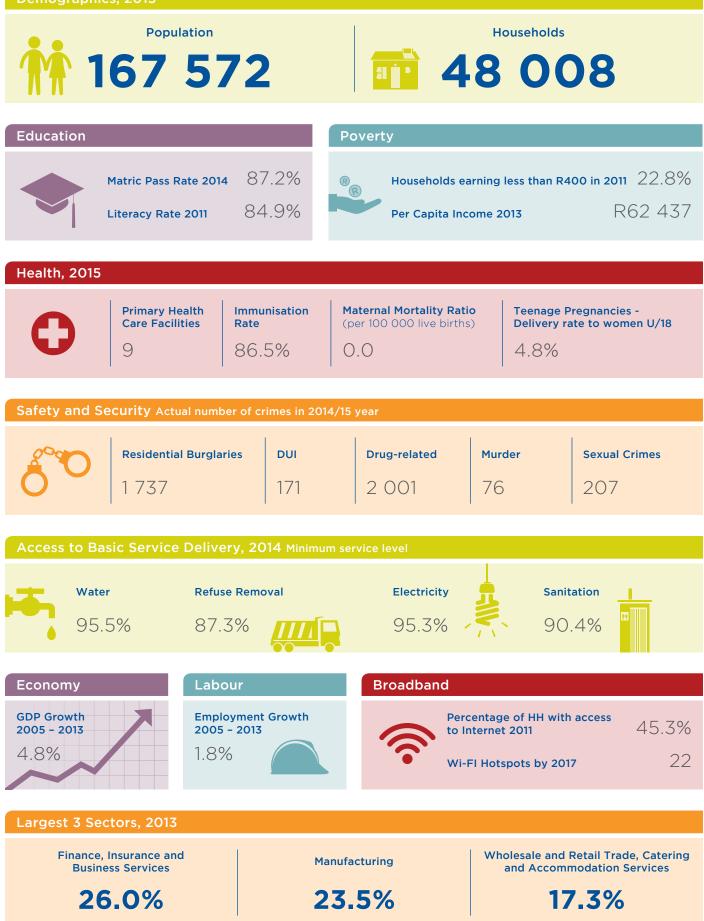
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Stellenbosch: At a Glance

Demographics, 2015



Introduction

Regional profiles provide the Western Cape municipalities with valuable data and information which assist in planning, budgeting and the prioritisation of municipal services. It is acknowledged that municipalities across the Western Cape have different capacities and therefore will use the information in this publication to suit their own needs.

The 2015 Socio-economic Profiles builds upon the success of previous editions by providing updated information relating to demographics, education, health, poverty, safety and security, basic service delivery, economy, labour market and environmental management. New information has also been added in the form of ward specific basic service delivery statistics, broadband penetration rates as well as municipal specific Wi-Fi roll-out data.

The profile furthermore complements the socio-economic performance analysis of the Municipal Economic Review and Outlook (MERO) 2015 which was published in October 2015.

In all, the profile reflects the socio-economic reality of municipalities. As such, valuable insight can be gained as to the developmental challenges faced by communities residing within a specific geographical area.

This profile primarily uses data sourced from Statistics South Africa, administrative data

from sector departments, the 2015 MERO and Quantec. The data sourced from sector departments are the most recent that is available. The latest survey data available at municipal level from Statistics South Africa includes the 2011 Census data. The updated population forecasts by the Department of Social Development will assist municipalities with future planning.

The information contained in this profile therefore highlights information for the **Stellenbosch Municipality** in relation to the broader Western Cape Province.

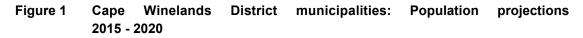


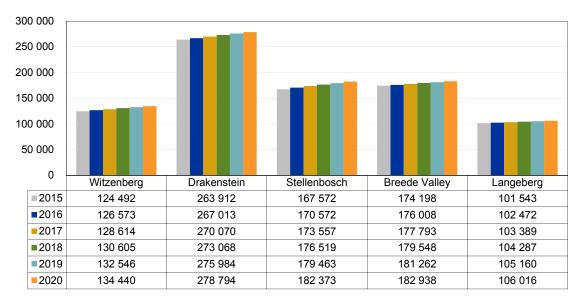
1. Demographics

1.1 Population

According to Census 2011 data, the Western Cape population grew at 2.6 per cent per annum between 2001 and 2011. This rate is higher than the national population growth rate of 1.5 per cent.

From this base, the Western Cape Department of Social Development was able to make accurate population growth estimates for each municipality for the period 2015 - 2020. These projections will assist municipalities to align their budget allocations with basic service delivery priorities.

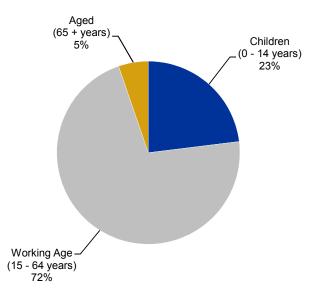




Source: Western Cape Department of Social Development, 2015

Of the five local municipalities within the Cape Winelands District, Stellenbosch has the third largest population which is estimated to be 167 572 in 2015. This total gradually increases across the 2015/16 MTREF years and is projected to reach 182 373 by 2020. This total equates to an approximate 8.8 per cent growth off the 2015 base estimate.





Source: Western Cape Department of Social Development, 2015

Figure 2 reflects the population age distribution of Stellenbosch for 2015 and reveals that approximately 72 per cent of the 167 572 inhabitants of the Municipality are currently considered to be within the working age category.

The population pyramids reflected in Figure 3 shows the age and gender distributions of the Stellenbosch's population in 2015 and 2020.

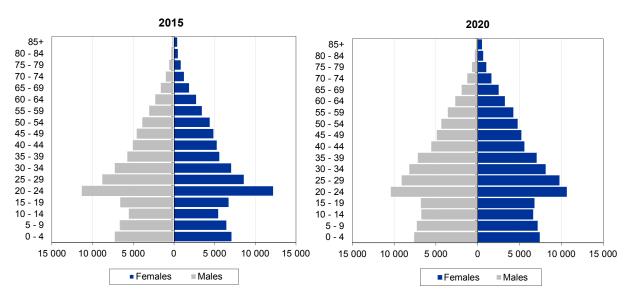


Figure 3 Stellenbosch: Population age distribution, 2015 and 2020

Source: Western Cape Department of Social Development, 2015

What is very apparent from the pyramids is the impact that the student population on population numbers and the bulge in particularly the 20 - 24 year age group as well as the 25 - 29 year age group. The shape, particularly of that of a smaller base is indicative of slower population growth.

1.2 Households

In addition to population projections, the projections on the number of households form the basis of municipal service delivery planning and essentially inform budget allocations towards basic services such as water, electricity, sanitation and refuse removal. It is therefore vital that for budget planning and implementation purposes a municipality rely on credible and accurate household estimates.

Municipality	2011	2012	2013	2014	2015
Cape Winelands District	204 909	208 265	211 646	215 104	218 620
Witzenberg	28 262	28 766	29 268	29 785	30 305
Drakenstein	61 859	62 818	63 785	64 768	65 778
Stellenbosch	44 953	45 695	46 446	47 219	48 008
Breede Valley	43 832	44 599	45 374	46 163	46 963
Langeberg	26 003	26 387	26 773	27 169	27 566

 Table 1
 Cape Winelands District: Household estimates, 2011 - 2015

Source: Quantec Research, 2015

As per Table 1, the total number of households in the Stellenbosch Municipality was estimated to be 48 008 in 2015 which equates to a 1.67 per cent growth from 2014.

2. Education

Education and training improves access to employment opportunities and helps to sustain and accelerate overall development. It expands the range of options available from which a person can choose to create opportunities for a fulfilling life. Through indirect positive effects on health and life expectancy, the level of education of a population also influences its welfare.

2.1 Literacy

Literacy is used to indicate a minimum education level attained. A simple definition of literacy is the ability to read and write, but it is more strictly defined as the successful completion of a minimum of 7 years of formal education. Since most learners start school at the age of 7 years, the literacy rate is calculated as the proportion of those 14 years and older who have successfully completed a minimum of 7 years of formal education. The literacy rate in Stellenbosch was recorded at 84.9 per cent in 2011 which is lower than the average literacy rate of the Western Cape at 87.2 per cent.

2.2 Learner enrolment, the learner-teacher ratio and learner dropout rate

Population dynamics, which include knowledge of the current population profile and projected learner growth, provide a basis for sound education planning. Knowing the learner enrolment numbers of a municipality enables the Western Cape Education Department (WCED) to determine the level of demands placed on schools for the current year as well as anticipated demands for future years. Having a sense of the exit points allows the WCED to plan more effectively with respect to Further Education and Training (FET). The learner-teacher ratio is very important, because it is closely related to the amount of money spent per child. It also has an impact on the education outcomes.

	Learner enro	Iment	Dropout rate		Learner-teacher ratio		
Municipality	2013 (Gr 1 - 12 + LSEN) ASS 2014		Average dropout rate 2012	Crude dropout rate using Yr 2013 - Gr 10 and Yr 2015 - Gr 12	Average learner- teacher ratio 2012	ASS 2014: ALL state+sgb+ substitutes teachers excl. practitioners and other	
Witzenberg	17 922	18 038	38.00%	29.00%	27.3	29.3	
Drakenstein	46 821	46 474	28.60%	27.00%	26.6	28.8	
Stellenbosch	26 657	25 274	31.90%	21.80%	21.5	26.3	
Breede Valley	32 004	32 076	40.90%	32.20%	27.3	29.3	
Langeberg	17 415	17 226	48.30%	38.70%	26.8	29.4	

Table 2 Cape Winelands District municipalities: Education indicators

Source: Western Cape Department of Education, Annual Survey of public and independent Schools (ASS) 2014

According to the Annual Survey of Public and Independent Schools (ASS) done by the WCED in 2014, learner enrolment in Stellenbosch has decreased slightly from 26 657 in 2013 to 25 274 in 2014. This might be due to the fact that learner enrolment in 2013 included learners with special education needs. The average school dropout rate in Stellenbosch was recorded at 31.90 per cent in 2012, however the dropout rate measured amongst Grade 10 learners of 2013 and Grade 12 learners at the start of 2015 were 21.80 per cent. This implies that one in every five Grade 10 learners in Stellenbosch dropped out of school before reaching Grade 12. The average learner-teacher ratio for Stellenbosch has increased between 2012 and 2014 from 21.3 to 26.3.

2.3 Education facilities

The availability of adequate education facilities such as schools, FET colleges and schools equipped with libraries and media centres could affect academic outcomes positively. Stellenbosch had 40 schools in 2014 which had to accommodate 25 274 learners at the start of 2014. The proportion of no fee schools has decreased from 67.5 per cent in 2012 to 65.0 per cent in 2014 indicating that, given the tough economic climate, schools have been reporting an increase in parents being unable to pay their school fees. In an effort to alleviate some of the funding challenges the

Western Cape Department of Education offered certain fee-paying schools to become no fee schools. This means that more than half of the schools in Stellenbosch, 65 per cent, are registered with the Western Cape Department of Education as no fee schools. Stellenbosch has a limited number (9) of Public FET Colleges whose mandate is to ensure that education, training and skills development initiatives respond to the economy, rural development challenges and an informed and critical citizenry. The number of schools in Stellenbosch with libraries or media centres was reduced from 32 to 29 between 2012 and 2014.

	Total number of schools		proportion of schools	Public FET colleges - main + sat	Education Number of s libraries/me	chools with
Municipality	2014 Dec	2012	2014 Dec	ASS 2014 Lib	2012	2014
Witzenberg	53	67.90%	84.90%	9	16	16
Drakenstein	68	58.80%	67.70%	17	45	48
Stellenbosch	40	67.50%	65.00%	9	32	29
Breede Valley	56	66.07%	80.40%	15	31	33
Langeberg	55	90.90%	87.30%	9	19	17

Table 3	Cape Winelands District municipalities: Education facilities, 2014
	oupe winelands District municipanties. Education facilities, 2014

Source: Western Cape Department of Education, Annual Survey of public and independent Schools (ASS) 2014

2.4 Educational outcomes (matric pass rate)

Education remains one of the key avenues through which the state is involved in the economy. In preparing individuals for future engagement in the labour market, policy choices and decisions in the sphere of education play a critical role in determining the extent to which future economic and poverty reduction plans can be realised. The 2014 matric results for Stellenbosch showed a slight regression in the matric pass rate from 88.1 per cent in 2013 to 87.2 per cent in 2014, together with deterioration in the learner-teacher ratio.

	Education outcomes: Matric pass rate			
Municipality	2013	2014		
Witzenberg	84.7%	75.1%		
Drakenstein	89.4%	83.8%		
Stellenbosch	88.1%	87.2%		
Breede Valley	81.7%	82.1%		
Langeberg	88.9%	84.2%		

 Table 4
 Cape Winelands District municipalities: Education outcomes, 2013 - 2014

Source: Western Cape Department of Education,

Annual Survey of public and independent Schools (ASS) 2014

3. Health¹

Good health is vital to achieving and maintaining a high quality of life. A diverse range of factors play a role in ensuring the good health of communities and that disease, especially preventable and contagious/communicable ones, are kept at bay. Some of the factors include lifestyle features that also depend on the provision of high quality municipal services, such as clean water, sanitation and the removal of solid waste.

The information provided by the Department of Health as detailed in this section, pertains only to public sector healthcare institutions. Any privately provided facilities or services are not reflected in the information below.

3.1 Healthcare services: Facilities and personnel

Access to healthcare facilities is directly dependent on the number and spread of facilities within a geographic space. South Africa's healthcare system is geared in such a way that people have to move from primary, with a referral system, to secondary and tertiary levels.

The Cape Winelands District has a range of primary healthcare facilities which includes 44 fixed clinics, 34 mobile/satellite clinics, 6 community day centres, 4 district hospitals and 2 regional hospitals.

Municipality	Number of PHC clinics - fixed	Number of PHC clinics - non- fixed (mobile/ satellite)	Community Health centres	Community Day centres	Total number of PHC facilities (fixed clinics, CHCs and CDCs, excluding non-fixed)	Number of district hospitals	Number of regional hospitals	Emergency medical services: Number of operational ambulances per 100 000 population
Cape Winelands District	44	34	0	6	84	4	2	0.47
Witzenberg	8	6	0	1	15	1	0	0.57
Drakenstein	14	6	0	3	23	0	1	0.23
Stellenbosch	8	7	0	1	16	1	0	0.31
Breede Valley	6	9	0	1	16	0	1	0.74
Langeberg	8	6	0	0	14	2	0	0.78

Table 5 Cape Winelands District: Healthcare services, 2015

Source: Western Cape Department of Health, 2015

Of these facilities, 8 fixed clinics, 7 mobile/satellite clinics, 1 community day centre and 1 district hospital is situated within the Stellenbosch Municipality.

¹ Information received from the Western Cape Department of Health including information from the Department's 2015/16 Annual Performance Plan and the Department's website.

Due to rural distances between towns and health facilities being much greater than in the metropole, combined with the relatively lower population per square kilometre in rural areas, ambulance coverage is greater in rural areas in order to maintain adequate coverage for rural communities. Within the Cape Winelands District, Stellenbosch has the second lowest number of ambulances per 100 000 population.

Healthcare personnel is also variedly spread across the districts; overall within the Western Cape, the Cape Winelands District had the second highest number of medical officers per 100 000 people, after the City of Cape Town.

Regional area	Number of medical officers*	Number of professional nurses*	Number of staff nurses*	Number of nursing assistants*
Western Cape	33.4	99.2	40.3	66.5
City of Cape Town	42.1	107.8	42.4	79.1
West Coast District	9.3	63.8	31.8	34.8
Cape Winelands District	22.3	84.8	41.4	49.2
Overberg District	11.5	70.6	24.7	31.9
Eden District	20.7	97.1	39.0	45.8
Central Karoo District	19.4	132.8	38.7	74.7

Table 6	Western Cape: Healthcare personnel, 20)15
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* Per 100 000 people

Source: Western Cape Department of Health, 2015

3.2 HIV, AIDS and Tuberculosis treatment and care

Although treatment and care is essential in the management of HIV and AIDS, the need and importance of preventative care cannot be over-emphasised, especially since to date, there is no known cure.

Table 7	Cape Winelands District: HIV, AIDS and Tuberculosis prevalence and care,
	2015

HIV - Antiretroviral treatment							Tuberculosis				
Municipality	ART patient load March 2013	ART patient load March 2014	ART patient load March 2015	Mother-to- child transmission rate	Number of ART clinics/ treatment sites 2015	Number of TB patients 2012/13	Number of TB patients 2013/14	Number of TB patients 2014/15	Number of TB clinics/ treatment sites 2015		
Cape Winelands District	14 170	17 463	19 615	1.7%	44	7 213	7 327	7 382	94		
Witzenberg	2 008	2 786	3 250	3.2%	5	1 066	1 112	1 035	19		
Drakenstein	4 627	5 276	5 902	1.1%	15	2 208	2 137	2 067	27		
Stellenbosch	2 940	3 574	4 021	2.6%	9	1 100	1 215	1 191	15		
Breede Valley	3 358	4 248	4 584	1.2%	8	1 833	1 865	2 050	17		
Langeberg	1 237	1 579	1 858	0.0%	7	1 006	998	1 039	16		

Source: Western Cape Department of Health, 2015

At the end of June 2011, the Province highlighted that anti-retroviral treatment (ART) was provided to over 100 000 persons in the Province. In 2015 to date, 19 615 ARTs was provided in the Cape Winelands District and 4 021 in the Stellenbosch municipal area, administered from 9 treatment sites.

In addition to improving the quality of life of the patient, anti-retroviral treatment to mothers both before and at birth, also decreases the chances that infants will contract HIV from their mothers. The most recent information for Stellenbosch indicates a mother-to-child transmission rate of 2.6 per cent which is above the 1.7 per cent District rate as well as the medium term annual target for 2015/16 and 2016/17.

Tuberculosis (TB) is a bacterial disease, and is a serious problem in South Africa, especially in the Western Cape. TB is highly infectious but curable. Approximately one out of ten people develop the disease and if not treated the infectious person can affect 20 other people or more in a year.

TB can only be cured if the full course of treatment, which can be from six to eight months, is completed. People who stop treatment are likely to develop multi-drug resistance, making the TB more difficult to cure. These cases are treated at TB specialist clinics. TB can be fatal if not treated.

The HIV epidemic has led to a large increase in the number of TB cases. People with HIV are far more susceptible to TB infection, and are less able to fight it off. TB is responsible for approximately a third of all deaths in HIV-infected people.

The number of TB patients in the Cape Winelands District has increased over past few years, at 7 382 in 2014/15, treated at 94 clinics or treatment sites. In the Stellenbosch municipal area, patient load has shown a slight decline from 2013/14 to 2014/15. Most recent information shows a patient load of 1 191 with treatment administered from 15 clinics or treatment sites.

3.3 Child health: Immunisation², malnutrition, neonatal mortality, low birth weight

Immunisation: Immunisation protects both adults and children against preventable infectious diseases. Low immunisation rates speak to the need for parents to understand the critical importance of immunisation, as well as the need to encourage parents to have their young children immunised. In 2015, the full immunisation coverage rate for the Cape Winelands was 79 per cent. Stellenbosch's rate was higher at 86 per cent.

Malnutrition: Malnutrition (either under- or over nutrition) refers to the condition whereby an individual does not receive adequate amounts or receives excessive amounts of nutrients. The number of malnourished children under five years in the Cape Winelands in 2015 was 2.94 per 100 000. At 1.76, Stellenbosch's rate was the lowest in the District.

² The immunisation rate is calculated as the number of children immunised as a percentage of the total number of children less than one year of age. If children who are one year or older are immunised, the immunisation rate for that year could be greater than 100 per cent because more than 100 per cent of children aged less than one year would have been immunised in that particular year.

		Child heal	Maternal health				
Municipality	Full immunisation coverage under 1 year	Severely malnutrition rate under 5 years	Neonatal mortality rate	Low birth weight	Maternal mortality ratio	Delivery rate to women under 18 years	Termination of pregnancy rate
Cape Winelands District	79%	2.94	4.9	15%	20.8	7.3%	9.4%
Witzenberg	69%	3.64	11.6	16%	0.0	9.6%	1.1%
Drakenstein	78%	3.65	0.7	14%	35.8	6.7%	15.4%
Stellenbosch	86%	1.76	4.0	10%	0.0	4.8%	8.0%
Breede Valley	86%	2.60	6.8	19%	27.0	7.9%	10.7%
Langeberg	73%	2.62	10.8	16%	0.0	9.8%	2.9%

Table 8	Cape Winelands District: Child and maternal health, 2015
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Source: Western Cape Department of Health, 2015

Neonatal mortality rate: The first 28 days of life - the neonatal period - represent the most vulnerable time for a child's survival. The neonatal mortality rate is the number of neonates dying before reaching 28 days of age, per 1 000 live births in a given year. Both the District (4.9) as well as Stellenbosch's (4.0) neonatal morality rates are below the Province's 2019 target of 6.0 per 1 000 live births.

Low birth weight: Low birth weight is defined as weight at birth of less than 2 500 g. Low birth weight is associated with a range of both short and long term consequences. In the Cape Winelands District, 15 per cent of babies had a low birth weight; at 10 per cent, Stellenbosch had the lowest percentage of babies with low birth weight in the District.

3.4 Maternal health: Maternal mortality, births to teenage mothers, termination of pregnancy

Maternal health refers to the health of women during pregnancy, childbirth and the postpartum period.

Maternal mortality³: Maternal death is death occurring during pregnancy, childbirth and the puerperium⁴ of a woman while pregnant` or within 42 days of termination of pregnancy, irrespective of the duration and site of pregnancy and irrespective of the cause of death (obstetric and non-obstetric).

Stellenbosch Municipality's most recent figures show a maternal mortality ratio of 0 per 100 000 live births with the District's ratio at 20.8. The Province has a maternal mortality ratio target of 65 by 2019.

³ Maternal deaths per 100 000 live births in health facilities.

⁴ *Puerperium* is defined as the time from the delivery of the placenta through the first few weeks after the delivery. This period is usually considered to be 6 weeks in duration.

Births to teenage mothers: Teenage pregnancy is almost always unplanned; as a result when young parents are placed in a position to care for their children, life can become particularly tough, especially if they do not have family or social support.

In the 2014/15 financial year, the delivery rate to women under 18 years in the Cape Winelands was 7.3 per cent. Stellenbosch's rate of 4.8 per cent was the lowest in the District.

Termination of pregnancy: Government hospitals, designated private doctors and gynaecologists, and non-profit providers offer safe and legal termination of pregnancy. To have a free abortion, the request must be made at a primary healthcare clinic, where the pregnancy will be confirmed, counselling provided, an appointment made, and a referral letter be given to a facility where the procedure can be performed.

Stellenbosch's termination of pregnancy rate⁵ of 8.0 per cent was below the District's 9.4 per cent termination rate.

Reading the teenage delivery and termination of pregnancy rates together suggests that, especially within some local municipalities, there may be a particular challenge with respect to unplanned and unwanted pregnancies.

3.5 Community based services

Community Based Services (CBS) in the Western Cape are provided by non-profit organisations (NPOs). Home CBS does not replace the family as the primary caregiver; it is meant to be a complementary and supportive service to the family to prevent 'burn-out' for family caregivers who care for sick relatives.

	Community based services							
Municipality	Total number of non-profit organisation appointed home carers	Total number of visits	Average numbe of monthly visit per carer					
Cape Winelands District	325	1 656 602	425					
Witzenberg	43	225 827	438					
Drakenstein	95	492 333	432					
Stellenbosch	68	376 007	461					
Breede Valley	63	375 992	497					
Langeberg	56	186 443	277					

Table 9	Cape Winelands District: Community based services, 2015
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Source: Western Cape Department of Health, 2015

The total number of NPOs appointed carers in Cape Winelands during 2014/15 was 325. On average, each carer carried out an average of 425 monthly visits. Within Stellenbosch municipality, the average number of monthly visits for the 68 carers was higher at 461.

⁵ Termination of pregnancy rate is calculated as the percentage of terminations as a proportion of the female population aged 15 to 44 years.

4. Poverty

In an effort to eliminate poverty and reduce inequality, the National Development Plan has set the objective of having zero households earn less than R418 per month by 2030.

As per Table 10, in 2011, Stellenbosch Municipality was still behind this target with approximately 22.7 per cent of its 44 953 households earning less than R400 a month. Lower levels of household income increases indigent dependency on municipal support. Municipal resources are therefore strained in an effort to provide free basic services.

Municipality	None income	R1 - R4 800	R4 801 - R9 600	R9 601 - R19 600	R19 601 - R38 200	R38 201 - R76 400	R76 401 - R153 800		R307 601 - R614 400		R1 228 801 - R2 457 600	R2 457 601 or more
Cape Winelands District	13.1	1.9	3.4	13.2	20.3	18.4	12.3	8.9	5.7	1.9	0.5	0.4
Witzenberg	6.4	1.9	4.0	18.5	25.8	20.9	10.4	6.8	3.9	0.9	0.3	0.2
Drakenstein	13.0	1.7	3.1	10.7	17.2	18.4	14.0	11.0	7.4	2.5	0.7	0.4
Stellenbosch	20.6	2.1	3.5	10.2	16.5	15.5	11.5	8.5	6.6	3.3	1.0	0.7
Breede Valley	12.0	1.7	2.9	14.9	22.2	19.0	12.6	8.5	4.7	1.0	0.3	0.2
Langeberg	9.7	2.3	4.4	15.5	24.9	20.0	11.0	7.3	3.6	0.8	0.2	0.2

 Table 10
 Cape Winelands District: Household income, 2011

Source: Statistics South Africa, Census 2011

Measuring levels of poverty and inequality for the period 2006 to 2011, Statistics South Africa's 2014 Poverty Trends Report specifies that the lower-bound poverty line (LBPL) for March 2011 was set at R443 (per capita, inflation adjusted poverty line) meaning that any individual earning less than R443 a month would have to sacrifice essential food items in order to obtain non-food goods. Compared to the above specified average household income for the Stellenbosch Municipality, it is concerning to note that 10 204 households in the municipal area earn less than R400 a month and must therefore survive on less than what an individual persons requires as per the LBPL measure.

Table 11	Cape Winelands District: Per capita income, 2011 - 2013
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	Per capita income (R)							
Regional area	2011	2012	2013					
Western Cape	43 614	44 291	44 553					
Cape Winelands District	36 441	37 071	37 252					
Witzenberg	21 243	21 640	21 787					
Drakenstein	35 655	36 427	36 535					
Stellenbosch	61 012	62 120	62 437					
Breede Valley	25 807	25 969	25 923					
Langeberg	33 872	34 204	34 592					

Source: Own calculations, Department of Social Development, 2015 and Quantec, 2015

As per Table 11, annual per capita income in the Stellenbosch Municipality is substantially higher than in any of the other local municipalities in the Cape Winelands region largely as a result of a well-balanced industry structure and broad based growth. Despite these high income levels, per capita income in Stellenbosch only increased by 0.51 per cent from R62 120 in 2012 to R62 437 in 2013. Although these figures bode well as a general measure of wealth and prosperity, the Municipality needs to make significant progress if it is to achieve the 2030 NDP target of R110 000 per person, per annum.

5. Safety and security

The Constitution upholds the notion that everybody has the right to freedom and security of the person. The safety of persons and property is therefore vitally important to the physical and emotional well-being of people and business. Without the respect of person and property, it would be impossible for people to live peacefully, without fear of attack and for businesses to flourish.

The extent of crime in South Africa does however not only have a significant impact on the livelihood of citizens, but also affects the general economy. Crime hampers growth and discourages investment and capital accumulation. If not addressed with seriousness, it has the potential to derail both social and economic prosperity.

Peoples' general impressions, as well as official statistics on safety and crime issues, mould perceptions of areas as living spaces or place in which to establish businesses. The discussion in this section that follows is limited to the reported contact and property-related crime such as murder and sexual crimes, as well as crime heavily dependent on police action for detecting drug-related crimes and driving under the influence of alcohol/drugs.

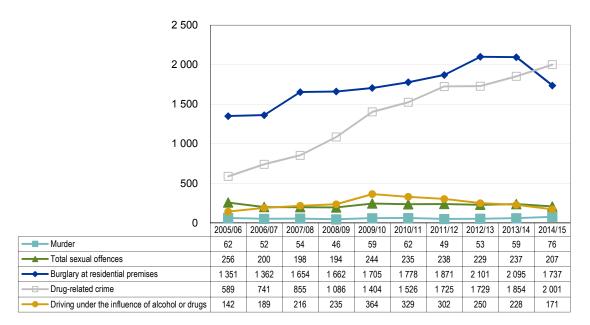


Figure 4 Stellenbosch: Crime statistics, 2005/06 - 2014/15

Source: SAPS, Quantec Research, 2015

The categories pertaining to residential burglaries and drug-related crime are dominant in relation to crime within Stellenbosch Municipality. There has been a steady increase in drug-related crimes since 2005/06 whilst residential burglaries plateaued since 2012/13. The number of murders picked up again since 2012/13. However, there has been a steady decline in total sexual offences as well as driving under the influence of alcohols and drugs since 2010/11.

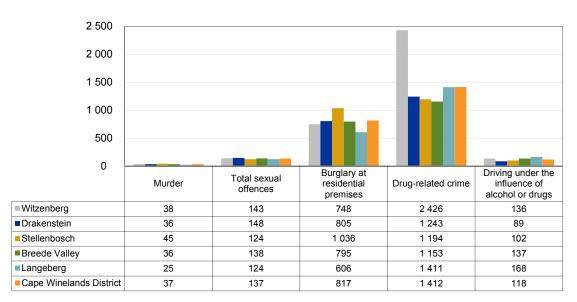


Figure 5 Cape Winelands District: Crime statistics per 100 000, 2014/15

Source: SAPS, Quantec Research, 2015

It is customary to express occurrences of crime per 100 000 as to allow for an easy comparison between areas with different population densities.

It is evident from above table that drug-related crimes - possession, manufacturing, distribution of illegal substances (including alcohol related transgressions) - is a major concern throughout the Cape Winelands District with an average of 1 412 crimes per 100 000. Drug-related crimes has a severe negative impact on human development by degrading the quality of life as it infiltrates all aspects of society including families, health, the work environment and the economy. Stellenbosch Municipality has the second lowest incidence of such crimes at 1 194 per 100 000 when compared to the rest of the District.

Given its regular occurrence and the psychological impact on victims, residential burglaries are an obstinate concern in South Africa. The Cape Winelands District is no exception, with residential burglaries being the second most prominent criminal offence among all local municipalities at an average of 817 occurrences per 100 000. Stellenbosch is especially hard hit by this crime, impacting on 1 036 persons per 100 000 - the highest incidence rate in the District.

6. Basic services

Access to basic services within South Africa is a basic human right. It is also an indication of the quality of life of the inhabitants in the country. Access to basic services has a wider impact on education and health and therefore also on the economy. The Municipal Economic Review and Outlook of 2015 further highlights the positive economic impact of basic infrastructure spending on the overall economy.

The 2015 Socio-economic Profile also contains a breakdown of access to basic services for each ward within Stellenbosch Municipality, hereto attached as an Annexure. This information provides the Municipality with an overview of ground-level access to basic services that will assist in the allocation of resources towards the areas of most need. This data will also in inform the Municipality's IDP and service delivery budget and implementation plan (SDBIP), the latter which, as per MFMA Circular 13, must contain a ward-specific capital works plan.

The levels of access to basic services will be discussed below in terms of access to water, sanitation, energy, refuse removal and housing.

6.1 Access to water

Table 12 indicates the levels of access to potable water within the Cape Winelands District in 2014.

Regional area	Piped water inside dwelling	Piped water inside yard	Piped water less than 200 m from dwelling	Piped water more than 200 m from dwelling	Borehole/ rain-water tank/well	Dam/river stream/ spring	Water-carrier tanker/water vendor	Other/ Unspecified
Western Cape	74.1	13.8	8.7	2.5	0.1	0.1	0.1	0.6
Cape Winelands District	75.6	13.7	8.0	1.8	0.1	0.1	0.0	0.6
Witzenberg	78.0	12.4	8.1	1.0	0.1	0.1	0.0	0.3
Drakenstein	79.3	13.9	5.4	0.8	0.1	0.1	0.0	0.4
Stellenbosch	73.9	8.6	12.9	3.4	0.1	0.1	0.0	0.8
Breede Valley	68.2	18.7	9.5	2.2	0.0	0.1	0.1	1.2
Langeberg	79.9	14.2	3.7	1.6	0.0	0.2	0.1	0.3

 Table 12
 Cape Winelands District: Access to water, 2014

Source: Quantec Research, 2015

The data indicates that in Stellenbosch 73.9 per cent of households have access to water within their dwellings and a further 8.6 per cent have access within their yard. The minimum service level is households that have access to water at least 200 m from their dwelling. Approximately 95.4 per cent of households meet this minimum standard. This puts Stellenbosch a little ways off from the NDP target of 100 per cent access to water by 2030. There is room for improvement in terms of household access to water within their homes.

Blue Drop Certification reflects on the actual quality of tap water within a municipality. It further acknowledges a municipality's ability to sustain this quality and provides an indication of preparedness to deal with any incident that may pose a water related health risk to the public.

The certification process attributes a weighted score according to a municipality's performance measured against a specific set of water management criteria such as water safety planning, drinking water quality process management and control, drinking water quality compliance etc. Municipalities that have overall scores above 95 per cent are officially awarded the prestigious Blue Drop Status.

In 2011, Stellenbosch had an excellent blue drop status of 98.25 per cent.

6.2 Access to refuse removal

Inadequate waste services lead to unpleasant living conditions and a contaminated, unhealthy environment. For this reason municipalities across the country provide their inhabitants with waste removal services.

Table 13 displays the levels of access to refuse removal within the Cape Winelands District in 2014.

Regional area	Removed at least once a week	Removed less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Unspecified/ other
Western Cape	89.8	1.2	2.8	4.6	1.0	0.6
Cape Winelands District	79.8	4.1	3.7	9.3	1.6	1.4
Witzenberg	69.7	8.7	6.9	11.4	1	2.3
Drakenstein	86.2	2.8	3.3	5.3	1	1.4
Stellenbosch	87.3	2.6	2.4	4.7	1	1.9
Breede Valley	75.1	5.2	5.1	11.3	2.9	0.4
Langeberg	72.0	2.7	1	20.8	2.1	1.4

Table 13 Cape Winelands District: Access to refuse removal, 2014

Source: Quantec Research, 2015

The data indicates that within Stellenbosch, 87.3 per cent of households have their refuse removed at least once a week. This is higher than that of its fellow municipalities. Stellenbosch outperforms the District in terms of the levels of access to refuse removal by the local authority at least once a week. The only concern is the 4.7 per cent of household that have their own refuse dump.

6.3 Access to electricity

Table 14 reflects the different sources of energy used for lighting by households in the Cape Winelands District.

Municipality	Electricity	Gas	Paraffin	Candles	Solar/other/ unspecified
Cape Winelands District	93.1	0.2	3.1	2.9	0.6
Witzenberg	93.4	0.2	1.8	3.9	0.8
Drakenstein	94.9	0.2	2.5	1.9	0.5
Stellenbosch	95.3	0.3	1.8	2.0	0.7
Breede Valley	87.8	0.2	7.2	4.3	0.5
Langeberg	94.3	0.1	1.0	3.5	1.1

Table 14	Cape Winelands District: Access to electricity, 2014
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Source: Quantec Research, 2015

Table 14 indicates that the biggest source of energy in Stellenbosch is electricity at 95.3 per cent in 2014. This is the highest level of energy access within the District and also slightly above the Cape Winelands District average of 93.1 per cent for 2014.

6.4 Access to sanitation

Access to sanitation is one of the most important basic services as it concerns the health and dignity of human beings. Table 15 shows the type of sanitation facilities available to households in Stellenbosch in 2014.

Table 15	Cape Winelands District: Access to sanitation, 2014
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Municipality	Flush or chemical toilet	Pit latrine	Bucket latrine	Not listed elsewhere
Cape Winelands District	90.8	0.7	2.6	5.9
Witzenberg	91.3	0.9	2.0	5.9
Drakenstein	93.6	0.5	2.9	2.9
Stellenbosch	90.4	0.9	3.0	5.7
Breede Valley	87.9	0.7	2.6	8.9
Langeberg	89.2	0.6	2.3	7.9

Source: Quantec Research, 2015

In 2014, 90.4 per cent of households had access to flush toilets (connected to sewerage/septic tank); 5.7 per cent of households did not have access to sanitation, whilst 3.9 per cent of households made use of bucket latrine and pit latrines.

6.5 Housing

Decent housing with the relevant basic services is essential for human security, dignity and well-being.

Municipality	House or brick structure on a separate stand or yard	Traditional dwelling	Flat in a block of flats	Town/ cluster/ semi- detached house (simplex, duplex or triplex)	House/ flat/ room in backyard	Informal dwelling/s hack in backyard	Informal dwelling/ shack NOT in backyard, e.g. in an informal/ squatter settlement	Room/ flatlet not in backyard but on a shared property	Other
Cape Winelands District	68.9	0.6	5.6	5.9	1.2	6.1	9.8	0.7	1.2
Witzenberg	77.5	0.8	1.2	5.6	0.6	3.6	8.6	0.6	1.4
Drakenstein	70.0	0.5	6.4	5.9	1.4	8.0	5.9	0.9	1.0
Stellenbosch	59.8	0.6	9.9	5.6	1.1	5.6	15.2	0.7	1.5
Breede Valley	61.0	0.7	5.7	8.0	1.6	5.6	15.4	0.6	1.4
Langeberg	84.7	0.4	1.4	3.2	0.9	6.0	2.3	0.2	0.8

Table 16	Cape Winelands	District: Types	of housing structures	, 2014

Source: Quantec Research, 2015

Table 16 highlights the most common dwellings in Stellenbosch Municipality were: House or brick structure on a separate stand (59.8 per), Informal dwellings in an informal/squatter camp (15.2 per cent), flat in block of flats (9.9 per cent), Town/cluster/semi-detached house (5.6 per cent) and the informal dwelling/shack in the backyard (5.6 per cent in 2014).

7. Economy

Economic growth in South Africa has been deteriorating since 2012. GDP growth of 2.5 per cent, 2.2 per cent and 1.5 per cent was achieved in 2012, 2013 and 2014 respectively. Initiatives to bolster economic growth on a national scale have been undertaken and progress has been made - talks to establish a more sustainable labour relations environment have been undertaken, and administrative reforms to reduce red tape have been implemented. Key structural issues which hinder the desired growth levels nevertheless remain in place. Given the close linkages between the municipalities in the Province and the national economy, the metro and district (and thus local) municipalities in the Western Cape are impacted by current state and fluctuations in the national economy.

The Cape Winelands District grew by 3.5 per cent on average year-on-year from 2005 - 2013. The district managed to grow by 1.8 per cent per annum during the recessionary period (2008 - 2009); while managing a higher growth rate of 2.7 per cent per annum during the recovery period (2010 - 2013). The district has not yet managed to revert back to its 2005 - 2014 trend growth rate.

As per Figure 6, Stellenbosch comprised the largest share (R17 billion) of the District's GDPR of R50 billion in 2013, making it the largest economy in the District, followed by Drakenstein (R15.5 billion), Breede Valley (R7.5 billion), Langeberg (R5.5 billion) and Witzenberg (R4.5 billion). The region experienced average year-on-year growth of 3.5 per cent from 2005 - 2013, slightly below the Provinces growth rate of 3.6 per cent over this period. Stellenbosch's economy grew by 4.8 per cent over the same period; the fastest growing municipality in the region.

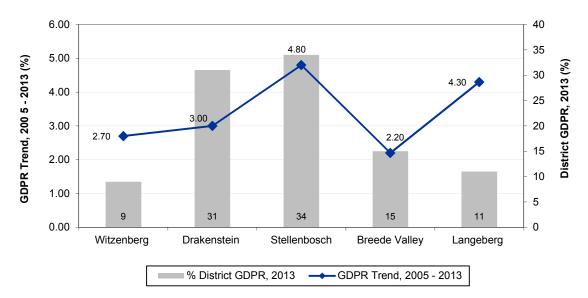


Figure 6 Cape Winelands District municipalities: GDPR growth, 2005 - 2013

Source: Municipal Economic Review and Outlook (MERO), 2015

As per Table 17, economic growth tapered down to 1.8 per cent annually during the recessionary period 2008 - 2009. Growth however picked up to 2.7 per cent over the period 2010 - 2013, but nevertheless remains significantly below the 2005 - 2013 trend growth. Stellenbosch's economic growth dropped to 2.6 per cent during the recession but steadied at 3.7 per cent during the recovery period.

	Real GDPR growth (average yoy %)						
	Expansion	Recession	Recovery				
Municipality	2000 - 2007	2008 - 2009	2010 - 2013				
Cape Winelands District	4.6	1.8	2.7				
Witzenberg	3.8	3.2	1.5				
Drakenstein	3.5	0.7	2.8				
Stellenbosch	6.4	2.6	3.7				
Breede Valley	3.0	0.4	1.6				
Langeberg	6.0	3.2	2.4				

Table 17 Cape Winelands District: GDPR growth, 2000 - 2013

Source: Municipal Economic Review and Outlook (MERO), 2015

This growth is underscored by significant variation in industry-specific growth rates. Growth in a particular industry depends on a number of factors (economies of scale, technological developments and demand trends among others) which often diverge among industries. Table 18 displays the industry-specific growth rates for each municipality in Cape Winelands District.

Industry	Witzenberg	Drakenstein	Stellenbosch	Breede Valley	Langeberg	Cape Winelands District
Agriculture, forestry and fishing	1.3	1.0	0.5	-0.1	0.3	0.6
Manufacturing	1.4	0.6	1.9	3	3.5	1.8
Construction	0.8	3.4	9.4	7.7	7.8	6.6
Commercial services	4.8	5.1	6.1	2.8	7.9	5.3
General government and Community, social and personal services	3.3	2.2	6.7	1.9	5.1	4
Other	0.5	4.1	4.3	-6	-0.4	1.8
Total	2.7	3	4.8	2.2	4.3	3.5

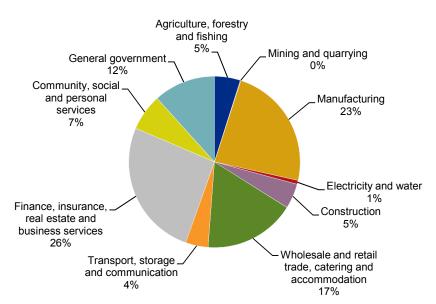
Table 18 Cape Winelands District: Sectoral growth, 2005 - 20
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Source: Municipal Economic Review and Outlook (MERO), 2015

Stellenbosch experienced robust growth in its construction sector (9.4 per cent) as well as its general government and community, social and personal (CSP) services sector (6.7 per cent), the fastest in the District in both instances. Stellenbosch's commercial services sector also experienced a high growth rate of 6.1 per cent.

However, Stellenbosch's agriculture sector experienced a slow growth rate of 0.5 per cent which is on par with the rest of the District, with Breede Valley experiencing a contraction of 0.1 per cent in the agriculture sector.

Figure 7 Stellenbosch: Sectoral composition, 2013



Source: Municipal Economic Review and Outlook (MERO), 2015

As seen in Figure 7, the finance, insurance, real estate and business services sector (as a part of the commercial services sector) and manufacturing sector are also the largest in the Municipality (comprising 26 per cent and 23 per cent of the Municipality's GDPR in 2013). The wholesale and retail trade, catering and accommodation sector, is the third largest in Stellenbosch contributing 17 per cent of the Municipality's total GDPR in 2013.

8. Labour market

Unemployment remains one of South Africa's biggest challenges. Overall unemployment (as per the narrow definition) stood at 25 per cent as at the end of 2014. Skills shortages, weak economic growth and electricity supply constraints are among the most significant constraints on employment growth. The NDP aims to reduce unemployment to 6 per cent by 2030. Improvements in education and training are integral to the attainment of this goal. These issues are structural and are felt at a local government level, where high levels of unemployment put significant strain on municipal funds.

Stellenbosch comprised 34 per cent of the GDPR but only 29 per cent of the employment in the District in 2013. Figure 8 shows that Stellenbosch together with Drakenstein employed 57 per cent of the District's working population. Witzenberg and Langeberg have the smallest economies (each employing only 12 per cent of the Districts working population).

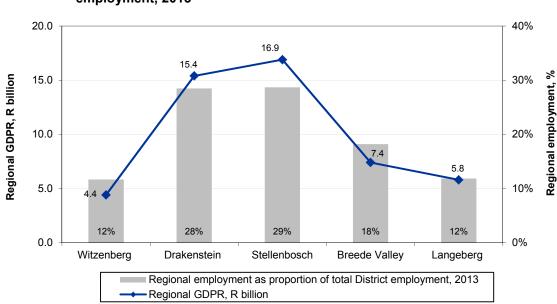


Figure 8 Cape Winelands District municipalities: Municipal GDPR vs municipal employment, 2013

Source: Municipal Economic Review and Outlook (MERO), 2015

Figure 9 provides a comparison of the annual municipal GDPR growth rate and annual employment growth rate in the District. Whilst all the municipalities in the District displayed a positive annual GDPR growth rate from 2005 - 2013, Stellenbosch was the only municipality who experienced a positive annual employment rate over the period. Stellenbosch achieved 1.8 per cent employment growth annually over the 2005 - 2013 periods, whilst the District experienced a contraction of 0.60 per cent. The average annual employment growth rate in Witzenberg was -2.3 per cent. Drakenstein and Breede Valley had employment growth rates of -1.0 and -1.9 per cent respectively. Langeberg, who had the second fastest GDPR growth per annum, experienced annual employment growth of -0.4 per cent.

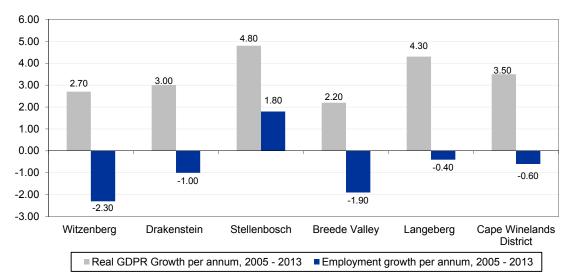
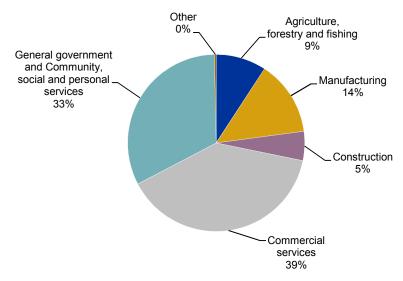


Figure 9 Cape Winelands District: Municipal GDPR vs municipal employment, 2005 - 2013

Source: Municipal Economic Review and Outlook (MERO), 2015

Figure 10, illustrates that Stellenbosch's commercial services sector is the largest employer in the Municipality, employing 39 per cent (47 054) of the Municipality's working population in 2013, followed by the general government and CSP services sector, which employed 33 per cent (39 815). The construction sector was among the Municipality's bottom 3 employers, employing only 5 per cent (6 033) of the Municipality's working population.

Figure 10 Stellenbosch: Employment by sector, 2013



Source: Municipal Economic Review and Outlook (MERO), 2015

As per Table 19, Stellenbosch Municipality experienced its highest job losses in the agriculture sector where net employment stood at -5 550. Despite the high economic growth experienced in the construction sector, this sector was the only other (apart from agriculture) sector to experience net job losses of 73. The next two fastest growing sectors (general government and CSP services and commercial services) created the most jobs in both the Municipality and District overall, with 7 755 net jobs created in the general government and CSP services sector and 7 427 net jobs created in the commercial services sector in the Municipality.

	Wi	tzenberg	Drakenstein Stellenbosch		llenbosch	Breede Valley Langeberg			Cape Winelands District			
Industry	GDPR trend	Net employment	GDPR trend	Net employment	GDPR trend	Net employment	GDPR trend	Net employment	GDPR trend	Net employment	GDPR trend	Net employment
Agriculture, forestry and fishing	1.30%	-7 773	1.00%	-8 396	0.50%	-5 550	-0.10%	-9 791	0.30%	-6 313	0.60%	-38 284
Manufacturing	1.40%	-399	0.60%	-1 338	1.90%	676	3.00%	-72	3.50%	505	1.80%	-557
Construction	0.80%	-381	3.40%	-1 805	9.40%	-73	7.70%	-241	7.80%	-191	6.60%	-2 699
Commercial services	4.80%	497	5.10%	3 675	6.10%	7 427	2.80%	91	7.90%	2 922	5.30%	15 597
General government and Community, social and personal services	3.30%	910	2.20%	581	6.70%	7 755	1.90%	420	5.10%	1 659	4.00%	11 856
Other	0.50%	19	4.10%	212	4.30%	94	-6.00%	23	-0.40%	81	1.80%	429
Total	2.70%	-7 127	3.00%	-7 071	4.80%	10 329	2.20%	-8 670	4.30%	-1 337	3.50%	-13 658

 Table 19
 Cape Winelands District: GDPR growth vs net employment, 2005 - 2013

Source: Municipal Economic Review and Outlook (MERO), 2015

Stellenbosch experienced an increase in labour demand in all the categories of employment except the semi-skilled and unskilled sectors. The demand for highly skilled labour grew at 3.3 per cent per annum, while demand for skilled labour grew by 1.9 per cent per annum.

Table 20	Cape Win	elands Dis	trict muni	icipalities: Er	mployment p	er skills	sector,
	2005 - 2013	3					

	Witz	enberg	Drak	enstein	Stelle	nbosch	Breed	e Valley	Lan	geberg
Sector composition	Number	Growth p.a. 2005 - 2013								
Highly skilled	2 730	1.1%	9 100	0.4%	9 028	3.3%	4 871	-0.5%	3 038	2.6%
Skilled	6 038	-0.5%	21 502	-0.5%	21 651	1.9%	11 249	-1.2%	7 526	1.7%
Semi- and unskilled	15 286	-4.6%	24 006	-4.3%	22 664	-1.9%	18 595	-4.9%	12 050	-4.3%
Informal	4 907	2.6%	16 060	4.5%	17 875	7.8%	10 475	4.7%	6 778	6.1%
Total employment	28 960	-2.3%	70 668	-1.0%	71 217	1.8%	45 190	-1.9%	29 392	-0.4%

Source: Municipal Economic Review and Outlook (MERO), 2015

Demand for labour in the semi- and unskilled sectors (which make up a third of the Municipality's working population and which employs the largest portion of the District's semi- and unskilled workforce) contracted by 1.9 per cent per annum. This pattern is prevalent across the District, with the majority of the job losses emanating from the semi- and unskilled sector. The job losses in this sector are congruent with the job losses experienced in the agriculture and construction sectors, and represent an increasing trend in the demand for skilled employment (and thus employment in the tertiary sector) over unskilled labour.

9. Environment

The 2011 National Strategy for Sustainable Development for South Africa describes the concept of sustainability as composing of three overlapping developmental spheres namely, the natural environment, social context and economic activity. These spheres, which are underpinned by a system of governance, are interlinked and fully dependent on the extent and functionality of the others. A trade-off in one sphere will compromise the functionality of another with significant knock-on effects.

The natural environment, inclusive of elements such as land, inland water, biodiversity and oceans and coastlines are increasingly under pressure as a result of certain socio-economic factors such as population growth rates and increased land use. These pressures on natural resources also pose limitations to economic growth. Climate change also poses significant bio-physical and economic risks and as such, sustainable and effective resource-use and climate change response, should be both a Provincial as well as Municipal strategic priority.

The Environmental section outlines key focus areas relevant to the current state of the natural environment and the associated need for environmental management, specifically, within the sphere of local government. These broad focus areas - legislative reform, integrated waste management, climate change - are briefly discussed in the following section and where available, include a municipal specific overview.

This information is intended to strengthen municipal planning support, inform future budget allocations and promote resource efficiency and effectiveness to ultimately preserve the natural environment for future generations.

9.1 Law reform - Implementation of SPLUMA/LUPA in municipalities

It is paramount that municipalities have planning and decision-making mechanisms in place to support its service delivery obligations and growth objectives. The Spatial Planning and Land Use Management Act, Act No. 16 of 2013 (SPLUMA), implemented on 1 July 2015, and the Western Cape Land Use Planning Act 2014 (LUPA) ushers in a new era of planning and development decision-making where the responsibility rests largely on local municipalities to fulfil their role as land use planning decision-makers as per Constitutional mandates and obligations. Section 24(1) of SPLUMA determines that a municipality must, after consultation as prescribed in the Act, adopt and approve a single land use scheme for its entire area within five years from the commencement of this Act.

This land use scheme serves as a tool for municipalities to guide and manage development according to their vision in terms of its Integrated Development Plan (IDP) and Spatial Development Framework (SDF). This will provide potential developers and land users with a clear indication of developable land and its associated land uses within the municipal space. Clarity in land use zones can avoid any future confusion and lengthy delays in terms of prospective developments/uses.

Currently many municipalities have a Land Use Management Scheme in place in the form of Zoning Schemes, which are compliant with the provisions of the Land Use Planning Ordinance, 1985 (Ordinance 15 of 1985) (LUPO). These are known as LUPO section 7 and 8 Schemes. The process has commenced to replace these schemes to meet the requirements for Integrated Zoning Schemes (Land Use Schemes) in terms of section 24 of SPLUMA.

Transitional arrangements following the planning law reform should be noted. The Department of Rural Development and Land Reform (DRD&LR) and SALGA Circular 1 of 2015 noted that a municipality can continue to operate within old order legislative parameters in so far as that legislation does not conflict with SPLUMA. The Circular proposed that the decision-making structures associated with SPLUMA must be applied.

The Western Cape Department of Environmental Affairs and Development Planning sought a legal opinion in this regard and subsequently adopted a different approach. After consultation, the Provincial Minister of Local Government, Environmental Affairs and Development Planning has decided against a blanket implementation of LUPA in the Western Cape. Instead, a staggered implementation approach will be adopted. LUPA will be implemented, and LUPO will be repealed, in a staggered manner as and when municipalities are ready.

During the transition period, Western Cape municipalities were advised not to adopt the 'hybrid' solution proposed by DRD&LR and SALGA (Circular 1 of 2015). Instead, municipalities were advised to utilise the old-order legislation in its entirety (including decision-making structures) until the Western Cape Land Use Planning Act, Act No. 3 of 2014 (LUPA) and the LUPA Municipal Planning By-law is adopted. This was communicated in WCG: EADP Departmental Circular 0009/2015.

In order to determine a municipality's readiness, the Department developed a set of actions that each Municipality must complete before the Minister will consider recommending that the Premier repeal LUPO and implement LUPA in a particular municipality.

These actions, as communicated in WCG: EADP Departmental Circular 0006/2015, are as follows:

- a) Municipalities must have adopted and gazetted their By-law on Municipal Land Use Planning.
- b) Municipalities must be at an advanced stage of establishing their Municipal Planning Tribunal. An advanced stage is regarded as having completed Step 7 of the 'Municipal Planning Tribunal Establishment Manual'.
- c) Municipalities must have Council adopted delegations. This includes appointing the Authorised Official(s) and adopting their categorisation of land use applications.
- d) Municipalities must have Council adopted tariff structures in place for receiving land use management applications in terms of the new legislation.

On completion of these actions, the Municipal Manager must submit a letter to the Department noting the completion thereof in addition to providing the Department with the necessary supporting documentation/proof. The Department will then initiate the process of LUPA implementation by the Premier in that particular municipality. Municipalities should note that this process may take 4 - 6 weeks to complete.

Stellenbosch Municipality has not yet implemented LUPA. At the time of writing they have not taken any official steps towards the implementation of LUPA.

Stellenbosch Municipality currently has a Land Use Management Scheme in the form of Zoning Schemes compliant with the provisions of the Land Use Planning Ordinance No. 15 of 1985 (LUPO).

Stellenbosch Municipality currently has a draft integrated zoning scheme which they intend to approve themselves when LUPA is implemented in their municipal area.

9.2 From waste management to integrated waste management

There is a shortage of available landfill airspace across the Province. The recovery of waste material for the waste economy is only at 9 per cent. It is paramount to move away from the landfill bias to integrated waste management. To achieve this, more integrated waste management infrastructure is urgently needed. This will increase the recovery of waste material and thereby save landfill airspace, promote the waste economy, reduce the environmental impacts of waste management and create jobs. A mind shift also is needed from municipalities to move away from seeing waste just as a nuisance and risk to realise the intrinsic value of waste and to utilise the potential value of it.

Due to the landfill airspace shortage, municipalities are exploring regional waste disposal options. Such options are however costly due to the high transport cost. The effective management of such regional facilities is also problematic due to the multiparty involvement. These regional facilities have to be operated by the district municipalities and unfortunately these municipalities do not receive any MIG Funding, which makes these facilities difficult to construct and operate. However, regionalisation of not just waste disposal facilities, but integrated waste management facilities have to be encouraged and alternative business cases such as private public ventures have to be explored.

All the waste disposal facilities except one (application to obtain a waste management licence is currently in process) have waste management licences. Since 2013 the requirements for landfill operation has increased dramatically, therefore making it difficult and very expensive for municipalities to comply with. The compliance of landfills in the Province has to increase dramatically which means that more resources are needed to meet the new legislative requirements. The majority of the landfills in the Province has by now reached full capacity must be closed and rehabilitated. Due to the strict environmental requirements set by the national government for closure and rehabilitation of waste disposal facilities, it is very

expensive to comply and municipalities find them in the difficult position that it does not have the necessary resources to rehabilitate these facilities.

Cost reflective waste tariffs are in general not charged by municipalities and combined with the high level of poverty with people who cannot afford high service charges, impacts negatively on the sustainability of the waste management service. Waste management should also be regarded as bulk infrastructure. If not, it further puts this service at a funding disadvantage. This is a perception that must be changed urgently so that waste management can also benefit equally from government funding for development and building of houses.

In general, the skill levels of municipal waste managers should be improved as well as the staff capacity available to render an effective and efficient waste management service. A further priority area for municipalities is to either align its waste management by-laws with national legislation or to publish a waste management bylaw which will assist in the management of this service and facilitate interaction which the private sector to improve service delivery and to benefit from the waste economy and job creation.

9.3 Climate change

The science of human-caused climate change is undisputable⁴. The average global temperature has already increased by 0.8°C; at this rate we are on track to reach a 4°C global average warming by 2100. Evidence suggests Africa is warming faster than the global average which is having severe impacts for hard-won developmental gains across an already vulnerable continent. Climate change impacts are already evident in the Western Cape and are negatively impacting and undermining economic and social development. Infrastructure, basic resources (water, food and energy) and livelihoods will all be impacted on and these impacts will affect all sectors and stakeholders, with a particular impact on the poor and vulnerable sectors of our community. Substantial responses are required by all role-players in order to adapt to the changes that will be experienced.

To date, the implementation of climate change responses to this changed climate has been slow. Many stakeholders do not perceive that it is their responsibility or mandate to prepare for climate change, and state limited resources and the delivery of other basic services as a challenge. Climate change is everyone's business and has to be incorporated into every facet of spatial and land use planning, service delivery, infrastructure development and economic planning. Failure would compromise basic service delivery, exacerbate poverty and undermine the most vulnerable communities.

⁶ The Intergovernmental Panel on Climate Change released its 5th global assessment report in 2013, and states "warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over dates to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gasses have increased".

Climate Variable	Observed trends	Outlook and Comments
Temperature	General trend of rising temperatures, including both minimum and maximum temperatures. Increased temperatures and increased evapotranspiration result in dry soils and vegetation which becomes more readily fire-prone. Tuesday March 3 rd 2015 was the highest temperature ever recorded (in 100 years) in Cape Town at 42°C. This coincided with severe fires.	For example there has been a decrease in the number of very cold days to create the cold (or chill) units required for deciduous fruit cultivars to grow. Number and intensity of fires seem to be on the increase. Disaster funds for fires will need to increase, but more importantly proactive protection of ecosystems and water is the required long term response.
Precipitation (Rain, snow)	Reduction in rain days in autumn and summer especially on the Southern Coast. Evidence of a trend in increasing severity of rainfall events (i.e. more rain falls in a shorter time. Winter rainfall season starting later each year. Anecdotal information of reduction of winter snow in Karoo – may result in decreased groundwater recharge. Current status unknown.	City of Cape Town responding with increase flood preparedness plans in winter, and increasing standard requirements for storm water flows in infrastructure. Late onset of rainfall in winter of 2015 was very close to causing a major problem for wheat farmers (documented in SmartAgri Status Quo Assessment – DOA and DEADP).
Wind	Wind velocity expected to increase, with stronger South Easters. Impacts currently unknown.	Impacts on tourism: e.g. Table Mountain cable car operations, Robben Island ferry operations, beach usability etc.
Sea level rise	Sea level has been rising at the same rate as global trends. See discussion on 'sea storm surges' below.	There is global concern that previous estimates of the rates of sea level rise may have been too optimistic, and that decision makers need to be aware that worst case scenarios in this century may be possible.
Ocean temperature	The Agulhas current has warmed by 1.5°C since 1980. Changes in the distributional range of fish and other marine species. Climate change is also responsible for shifts in the distribution of the West Coast rock lobster. However the full understanding of these changes is complex and cannot necessarily all be attributed to a changing climate. ⁷	Impacts of shifting marine resources have implications for social and economic fabric of coastal communities.

The following are some recent observed trends in the Western Cape:

⁷ SAEON. 2011 Observations in Environmental Change in South Africa.

Climate Variable	Observed trends	Outlook and Comments
Ocean Acidification ⁸	Ocean acidification would have severe impacts on most ocean life. Currently the ocean has already acidified by 0.1 pH points as a global average (this varies from region to region).	Current impacts not evidently well described.

Between 2003 and 2008, direct damage (predominantly from floods and drought in the Eden and Central Karoo Districts), caused approximately R3 billion of damage in the Western Cape. If not closely monitored and managed, above variables could potentially cause other severe natural disasters which will be detrimental to human life. These include:

Climate Variable	Observed trends	Outlook and Comments
Floods/Droughts	Numerous flood and drought events have occurred in the Western Cape in the past decades with frequency seeming to increase. Difficult to determine if these are all attributable to a changing climate, but likely, given similar trends globally. There is currently a drought in the north of South Africa which is impacting sugar and maize commodities. The Central Karoo might be entering a drought scenario (although some climate responses such as the water reuse plant in Beaufort West might be reducing these impacts currently).	ALERT: As at 20 September 2015, the Western Cape had 72 per cent of dam capacity at the end of the wet season (2014 it was at 92 per cent of capacity).
Sea Storm Surges (big storm events)	In the past 15 years various big storm events have caused infrastructure damage along the Western Cape coastline. Studies reflect sea level has risen on the Western Cape coastline in accordance with global trends. Most impacts are due to inappropriate coastal development.	Coastal municipalities potentially having a big role to play here. Insurance companies are starting to withdraw from some vulnerable coastal areas.

 $^{^{8}\,}$ As the ocean absorbs $CO_{2}\,its\,pH$ changes.

Climate Variable	Observed trends	Outlook and Comments
Fire	Observed increased fire incidences ⁹ and potential increase in extent and severity of fires. 2015 fires occurred in record breaking heat temperatures: Economic implications to the Tourism industry unknown; costs to CapeNature and SANParks not yet documented.	Challenging to differentiate how much of increase in fires and intensity is climate change related but global trends indicate climate change has a role to play. GLOBAL ALERTS: Fires in the USA and Canada in 2015 are unprecedented in scale and costs; also on the back of a prolonged drought.
Hail	There is anecdotal evidence that more hail storms are occurring in areas where it has never before been experienced in the Western Cape, causing economic losses to agriculture (SmartAgri Status Quo Report).	Increase likelihood of hail storms is not well understood.

There is thus a unique opportunity in the immediate short term to radically shift planning and infrastructure development to become climate resilient, and to reduce greenhouse gas emissions that are directly driving the problem. The window of opportunity is however short and closing rapidly, implying that climate change response is urgent if the Western Cape aims to continue with a thriving local economy and to reducing inequality and poverty.

Current disaster funding approaches are not sufficient for responding to climate change. These funds are generally reactive. Disaster funding is often utilised to rebuild the exact same infrastructure in the exact same places. In order to respond effectively and responsibly to climate change all departments need to integrate climate change into infrastructure build, and planning, and to utilise standards appropriate for a changed climate regime. Furthermore, critical ecological infrastructure is required to support and buffer built infrastructure (such as dune barriers, wetlands and mountain catchments - our "natural water towers").

10. Broadband penetration

Broadband penetration offers immense economic benefits by fostering competition, encouraging innovation, developing human capital and by building infrastructure. Improved connectivity will attract new business and investments, reduce the cost of doing business and will offer small, medium and micro enterprises access to new markets.

^{9 &}lt;u>http://www.iol.co.za/news/south-africa/western-cape/cape-fire-insurance-firms-brace-for-claims-1.1827557#.VfnA8RGeDGc</u>

The World Bank found that for every 10 per cent increase in broadband penetration in developing countries, there is an increase of 1.38 per cent in GDP growth. Municipal broadband initiatives (internet services provided by a municipality) also offer great potential for enhanced economic growth and development, provided they address the key pillars of access, readiness (skills) and usage (stimulating demand for the Internet).

Improved internet penetration and accessibility also offers direct benefits for local government entities to improve the efficiency and effectiveness of public services. These benefits include the roll-out of e-services that will allow for the online payment of municipal accounts, motor vehicle registrations, animal registrations, reporting of infrastructure defects, free indigent services applications, career applications as well as tender applications. Online feedback mechanisms via social media will also support the facilitation of public participation during the annual reporting process and will offer constituents a platform to express public satisfaction.

Greater connectivity will also allow public servants remote access to information such as previous traffic infringements, building plan applications and outstanding accounts, for example.

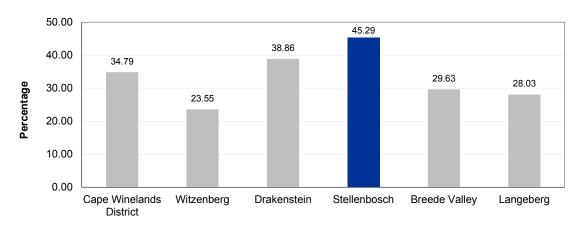


Figure 11 Cape Winelands District: Internet access, 2011

In the Cape Winelands Municipality, 34 per cent of households had access to the internet in 2011. The Stellenbosch Municipality compares favourably and, at 45.29 per cent, had the highest penetration rate in the District. This rate offers great potential for economic growth by improving access, readiness and usage of the Internet within the Municipality.

In order to improve access and stimulate usage of the Internet, the Western Cape Broadband Initiative will be implementing Wi-Fi hotspots at a provincial government building in every ward across the Province over the next three years. These hotspots will allow limited free access (250 Mb per month) to any citizen, as well as allow all gov.za websites to be accessed free of charge. In the Cape Winelands District, Wi-Fi hotspots will be installed in 103 wards in total, including a hotspot in 22 wards in the Stellenbosch Municipality.

Source: Statistics South Africa, Census 2011

11. Concluding remarks

Stellenbosch Municipality has shown improvement over the years with regard to its socio-economic environment. The Municipality has a strong economic resource base including human capital that could contribute to economic growth and development. The favourable economic climate in Stellenbosch has led to decreasing poverty levels.

Despite the progress, in relation to other municipalities, poverty levels are still relatively high. According to Census 2011 information, 20.6 per cent of households had no income, which places increased reliance on indigent support from the Municipality and other social services being provided by the Province. This is evident in the large percentage of households without access to formal housing. The Municipality has made significant progress in addressing service delivery backlogs from 2001 to 2011.

Education indicators show that Stellenbosch's 2011 literacy rate of 84.9 per cent was still slightly below the Province's 87.2 per cent. Education outcomes as measured by the matric pass rate in 2014 of 87.2 per cent, is down from the 2013 pass rate of 88.1 per cent which is a concern.

The Cape Winelands compares favourably in terms of above average healthcare personnel allocation when compared to the other districts within the Province. Stellenbosch has a quite a heavy anti-retroviral treatment load which is serviced by 9 treatment sites. Consequently, the Mother-to-child transmission rate of 2.6 per cent is the second highest in the District and above the District and Provincial averages. The number of registered TB patients has gradually declined since 2013/14.

Stellenbosch fares well with regards to its Child and Maternal Health indicators. Its immunisation rate at 86 per cent is above the District average. At 1.76, its malnutrition rate of children under the age of 5 years is the lowest in the District and its neonatal mortality rate of 4.0 per 1 000 live births is also amongst the lowest. A maternal mortality rate of 0 per 100 000 live births reflects good standards of healthcare in the Municipality.

Stellenbosch Municipality is hard hit when it comes to residential burglaries and drug-related crime. Murders is also a challenge as the murder rate per 100 000 population, at 45, it is the highest in the District.

Economic growth in Stellenbosch is the strongest within the District, the post-recession recovery period (2010 - 2013) growth at 3.7 per cent per annum. Despite high job losses in the agriculture sector, Stellenbosch was the only municipality in the District to experience overall net growth in employment over the 2005 - 2013 period.

Given strong population growth and continued emphasis on economic growth and development, the need to conserve and better manage limited resources, including that of the environment, is becoming more pronounced. Observable trends and impacts related to climate change are also fast becoming tangible and something that requires behavioral changes, also from municipalities. The interface of the environment with social and economic sectors will likely require much more attention and emphasis in coming years.

Annexure

Water				B ! 1(4) :		D : 1/() :	
Municipality/ Ward	Piped (tap) water inside dwelling/ institution	Piped (tap) water inside yard	Piped (tap) water on community stand: distance less than 200 m from dwelling/ institution		Piped (tap) water on community stand: distance between 500 m and 1 000 m (1 km) from dwelling/ institution	Piped (tap) water on community stand: distance greater than 1 000 m (1 km) from dwelling/ institution	No access to piped (tap) water
Stellenbosch	31 437	3 517	6 231	1 514	270	46	405
Ward 1	2 765	518	100	2	1	2	22
Ward 2	598	125	1 597	372	1	1	91
Ward 3	1 758	264	11	13	3	0	29
Ward 4	1 688	154	29	27	0	2	47
Ward 5	1 157	112	1	0	0	4	11
Ward 6	1 302	56	18	0	2	0	11
Ward 7	1 742	9	0	0	0	2	3
Ward 8	792	15	2	0	0	0	2
Ward 9	215	3	0	0	2	0	0
Ward 10	2 040	14	0	1	2	0	7
Ward 11	2 057	84	38	0	0	0	12
Ward 12	945	135	1 434	422	99	24	15
Ward 13	483	86	23	6	4	0	2
Ward 14	659	249	604	142	35	2	20
Ward 15	1 003	240	1 662	441	105	4	30
Ward 16	1 399	322	6	0	0	0	6
Ward 17	2 164	55	3	1	1	0	13
Ward 18	1 514	340	318	2	2	0	25
Ward 19	1 756	387	170	35	8	2	15
Ward 20	1 793	239	107	26	6	4	18
Ward 21	2 081	81	100	21	1	0	12
Ward 22	1 527	29	8	1	1	0	13

Stellenbosch: Ward specific access to basic services, 2011

Municipality/ Ward	Candles Electricity Gas Paraffin (not a valid option) Solar None								
	Electricity			(not a valid option)		None			
Stellenbosch	40 352	156	1 772	898	52	190			
Ward 1	3 314	19	8	46	9	15			
Ward 2	2 178	9	469	113	2	14			
Ward 3	2 030	3	2	36	1	6			
Ward 4	1 870	3	9	57	2	5			
Ward 5	1 278	0	0	3	1	2			
Ward 6	1 362	11	0	12	1	3			
Ward 7	1 748	1	4	0	2	0			
Ward 8	802	1	1	6	0	0			
Ward 9	215	0	2	0	0	2			
Ward 10	2 058	2	1	1	1	1			
Ward 11	2 158	12	1	12	1	6			
Ward 12	1 730	32	1 164	140	6	2			
Ward 13	598	0	4	3	0	0			
Ward 14	1 643	7	29	27	2	3			
Ward 15	3 393	16	41	21	4	9			
Ward 16	1 708	3	0	15	2	4			
Ward 17	2 192	12	1	0	2	30			
Ward 18	2 106	0	12	77	1	6			
Ward 19	2 163	12	5	138	4	50			
Ward 20	2 075	8	4	92	3	12			
Ward 21	2 167	1	11	95	3	20			
Ward 22	1 565	4	3	5	4				

Removed by local authority/private Municipality/ company at least Ward once a week		Removed by local authority/private company less often	Communal refuse dump	Own refuse dump	No rubbish disposal	Other
Stellenbosch	37 762	1 066	1 345	2 058	420	768
Ward 1	3 019	89	72	185	7	37
Ward 2	2 572	147	3	6	14	44
Ward 3	1 631	143	33	140	27	104
Ward 4	1 827	16	4	47	22	31
Ward 5	1 175	67	9	14	10	9
Ward 6	1 129	78	10	37	27	108
Ward 7	1 749	4	2	0	0	0
Ward 8	769	12	14	12	0	2
Ward 9	218	0	0	0	1	0
Ward 10	1 987	22	12	21	1	21
Ward 11	1 839	63	104	131	21	33
Ward 12	2 493	5	347	136	38	54
Ward 13	553	16	10	12	0	13
Ward 14	1 650	5	50	4	2	0
Ward 15	3 332	17	96	23	8	8
Ward 16	1 701	2	7	18	0	3
Ward 17	2 217	19	0	0	0	1
Ward 18	2 025	31	52	44	30	19
Ward 19	1 088	127	403	583	77	93
Ward 20	1 239	119	91	488	113	143
Ward 21	2 045	55	17	132	13	35
Ward 22	1 502	27	10	25	8	8

Sanitation

Municipality/ Ward	Flush toilet (connected to sewerage system)	Flush toilet (with septic tank)	Chemical toilet	Pit toilet with ventilation (VIP)	Pit toilet without ventilation	Bucket toilet	Other	None
Stellenbosch	1 035	37 804	1 709	321	209	167	1 137	1 038
Ward 1	33	3 040	99	16	19	9	92	102
Ward 2	222	1 687	9	1	1	4	327	533
Ward 3	38	1 696	151	14	0	0	150	30
Ward 4	56	1 675	121	0	8	26	40	20
Ward 5	2	1 198	67	1	5	0	3	9
Ward 6	27	1 297	53	0	3	0	2	7
Ward 7	7	1 736	5	3	2	0	0	2
Ward 8	3	788	16	0	0	0	3	0
Ward 9	0	218	1	0	0	0	0	0
Ward 10	5	2 033	22	0	0	0	4	1
Ward 11	70	2 041	26	6	12	11	19	7
Ward 12	118	2 878	22	1	9	2	19	25
Ward 13	4	565	16	0	0	0	9	10
Ward 14	38	1 632	14	1	1	0	23	2
Ward 15	79	3 307	12	1	9	3	42	31
Ward 16	57	1 590	13	0	1	4	51	16
Ward 17	18	2 179	19	0	1	0	7	13
Ward 18	27	1 817	141	25	16	1	118	56
Ward 19	155	1 554	264	89	72	68	102	68
Ward 20	49	1 370	495	58	34	33	93	61
Ward 21	11	1 971	118	105	17	5	32	40
Ward 22	14	1 532	26	0	0	0	2	5