4. MUNICIPAL ANALYSIS

4.1 INTRODUCTION

The status quo of the Municipality is analysed within the three overarching Spatial Themes, as discussed in **subsection 3.2**, and as illustrated in the table below.

Table 4.1: Spatial Themes and Analysis Categories

Themes and Elements	Built	Socio-Economic	Biophysical
	- Transport and movement systems - Engineering infrastructure - Settlement patterns - Housing and informality - Land availability: vacant, underutilised land and land with potential for redevelopment - Energy	- Economic trends - Population statistics - Income levels - Health statistics and facilities - Education statistics and facilities	- Geology and soils - Topography and slopes - Climate - Vegetation and biodiversity - Water resources - Drainage - Climate change - Agriculture - Mining

4.2 UNDERSTANDING THE BIOPHYSICAL ENVIRONMENT

4.2.1 Geology and Soils

The geological area comprises of the Bokkeveld Group, which is predominantly made up of mudstones. After the Cape Supergroup had been folded into the Cape Fold Mountains, these soft mudstones readily washed away from the mountain tops and only remain in the valleys. Here they form the fertile soils on which the vineyards and fruit orchards of the Western Cape flourish with the help of irrigation from the rivers that have their sources in the surrounding mountains.

A variety of soil types can be found within the TWKM area, with Glenrosa and Mispah soil types being the most dominant. Glenrosa soil is gravelly, has yellow topsoil, and with weakly weathered subsoil, it dries out fairly quickly. Mispah can generally be characterised as being shallow and rocky, which in turn is porous, meaning that this soil type does not retain water efficiently. Soils are a mix of predominantly shale-derived clays with some sandstone-derived sands and alluvial sand deposits from the Palmiet River. The clays predominantly support agriculture while the sandstone derived soils support fynbos.

4.2.2 Topography and Slopes

The topography within the TWKM area can be described as a mixture of plains and hills, with patches of steep slopes and mountainous areas. The Riviersonderend Mountain range essentially forms the northern municipal boundary, which borders neighbouring municipalities (Langeberg, Breede Valley and Stellenbosch) and are undeveloped due to the steep slopes and rough terrain. In addition to this, the Kleinrivier Mountains has similar characteristics. This mountain range essentially forms part of the southern border neighbouring Overstrand Municipality. The other predominant high-lying area is the Swartberg Mountains located in Caledon.

The farmlands situated between Caledon and Riviersonderend have a relatively gradual slope. In contrast, the area west of Caledon can be characterised by much deeper valleys with steeper slopes of which the bulk is made up of the Groenlandberg Nature Reserve.

Mountain catchments in the study area include:

- Hottentots-Holland Mountain Catchment Area;
- Riviersonderend Mountain Catchment Area;
- Hawequas Mountain Catchment area.

4.2.3 Climate

The prevailing Mediterranean climate is synonymous with wet winters and warm to hot, dry summers. This climate also allows for many outdoor activities prevalent within the Municipality that contribute to the tourism sector and an important role in the production of fruit for export from the TWKM region.

The majority of the rainfall occurs between the months of May and August. The areas surrounding the Groenlandberg Nature Reserve experience an increased amount of rainfall (Grabouw, Botrivier and Vyeboom farms with an average amount of 900 mm annually). In contrast, the eastern part of the municipal area (Riviersonderend) experiences less rainfall, with an average annual rainfall of 337 mm.

4.2.4 Vegetation and Biodiversity

The TWKM area consists mainly of two broad vegetation types, namely Renosterveld and Fynbos. The following vegetation types are found within the Municipality (Mucina & Rutherford, 2006[1]):

1. Kogelberg Sandstone Fynbos (CR);
2. Overberg Sandstone Fynbos (CR);
3. South Sonderend Fynbos (LT);
4. Hawequas Sandstone Fynbos (VU);
5. Western Coastal Shale Band Vegetation (LT);
6. Boland Granite Fynbos (VU);
7. Elgin Shale Fynbos (CR);
8. Greyton Shale Fynbos (EN);
9. Western Rûens Shale Renosterveld (CR);
10. Central Rûens Shale Renosterveld (CR);
11. Rûens Silcrete Renosterveld (CR);
12. Cape Lowland Freshwater Wetlands (LT);
13. Cape Lowland Alluvial Vegetation (CR).

The sandstone fynbos vegetation types are located within the mountain ranges in the western, southern and northern parts of the Municipality, which include the Kogelberg, Hottentots Holland, Groenlandberg, Babylonstoring/Shaw's Mountain, Klein Rivier, Klein Swartberg and the Riviersonderend Mountains. This type of vegetation occurs in the sandy, acid soils derived from the Table Mountain Group sandstone, which are highly infertile. Due to the infertile soils and typically steep slopes, these vegetation types are not suitable for agriculture or urban development and therefore there are relatively high proportions of these vegetation types remaining.

The renosterveld vegetation types occur in the low lying areas within the Municipality, predominantly on shale derived soils. These soils are fertile and suitable for cultivation and as a result the majority of the renosterveld vegetation has been lost to agriculture, with only small fragments remaining typically on slopes which are too steep or rocky to cultivate. As a result, this vegetation type is highly threatened with the remaining fragments of very high conservation significance.

[1] Mucina, L. & Rutherford, M.C. (eds) 2006. The Vegetation of South Africa, Lesotho and Swaziland. Strelitzia 19. South African Biodiversity Institute, Pretoria.

[1] CR – Critically Endangered; EN – Endangered; VU – Vulnerable; LT – Least Threatened

The shale fynbos vegetation types occur in areas with an underlying shale substrate which receive higher rainfall than areas supporting renosterveld, resulting in greater leaching of the soils. It occurs in the Elgin Basin between the mountains and further east on the mountain foot slopes. It contains renosterveld elements but can be classified as fynbos due to the presence of characteristic dominant fynbos elements. The shale fynbos is similarly threatened, as with renosterveld, due to the fertile soils suitable for cultivation.

There are no national parks within the Municipality. There is however several provincial nature reserves managed by CapeNature within the Municipality, which constitute a large proportion of the mountainous areas of the municipal area. The provincial nature reserves are Houwhoek, Groenlandberg, Hottentots Holland, Theewaters and Riviersonderend. Supporting the provincial nature reserves are declared mountain catchment areas which occur on adjacent private land and are of importance in terms of ecosystem services, particularly water provision.

There are three municipal nature reserves, namely Caledon, Villiersdorp and Greyton, adjacent to the respective towns which protect important biodiversity. Much of the high priority areas for protecting remaining biodiversity in the lowlands are located on private land. Conservation on private land is implemented through the CapeNature stewardship programme, as well as related initiatives such as conservancies (e.g. Klein Swartberg and Groenlandberg) and easements with non-governmental organisations.

Conservancies within TWKM include:

- Theewaters Conservancy;
- Groenlandberg Conservancy;
- Klein Swartberg Conservancy;
- Akkedisberg Conservancy.

In line with the PSDF, the TWKM area has been delineated into Spatial Planning Categories (SPCs). It must be noted that these SPCs do not represent development proposals and do not add or detract from development rights. The SPCs are based on the six Critical Biodiversity Areas (BDAs) and forms a tool for TWKM to assess the suitability of alternative rural land uses in the different SPCs, as well as the appropriate location, scale and scope of these uses. **Plans 4.1 and 4.2** illustrate the core BDAs and SPCs within TWKM. **Table 4.2** illustrates the alignment between of SPCs with BDAs.

Table 4.3 provides the management objective which each CBA category aims to achieve. This table can be used as a guideline when assessing land use applications in the TWKM rural areas.

Table 4.2: Alignment of Spatial Planning Categories with Biodiversity Areas

CBA[1] Category / SPC[2]	Protected Area	CBA 1 [1] (Terrestrail/ Aquatic)	CBA 2 (Degraded)	ESA 1[2] (Terrestrial/ Aquatic)	ESA 2 (Restore) [2]	Other Natural Areas	No Natural Remaining
Core 1	■	■					
Core 2			■	■			
Buffer 1						■	
Buffer 2					■	■	
Agriculture							■
Settlement							■

[1] CBA = Critical Biodiversity Area

[2] ESA = Ecological Support Area

Table 4.3: Biodiversity Area Categories Management Objectives

Map Category	Definition	Desired Management Objective
Protected Area	Areas that are proclaimed as protected areas under national or provincial legislation.	Must be kept in a natural state, with a management plan focused on maintaining or improving the state of biodiversity. A benchmark for biodiversity.
CBA 1	Areas in a natural condition that are required to meet biodiversity targets for species, ecosystems or ecological processes and infrastructure.	Maintain in a natural or near natural state, with no further loss of habitat. Degraded areas should be rehabilitated. Only low-impact, biodiversity-sensitive land uses are appropriate.
CBA 2	Areas in a degraded or secondary condition that are required to meet biodiversity targets, for species, ecosystems or ecological processes and infrastructure.	Maintain in a functional, natural or near-natural state, with no further loss of natural habitat. These areas should be rehabilitated.
ESA 1	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.	Maintain in a functional, near natural state. Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised.
ESA 2	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs, and are often vital for delivering ecosystem services.	Restore and/or manage to minimise impact on ecological infrastructure functioning; especially soil and water-related services.
Other Natural Areas	Areas that have not been identified as a priority in the current systematic biodiversity plan, but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although they have not been prioritised for biodiversity, they are still an important part of the natural ecosystem.	Minimise habitat and species loss and ensure ecosystem functionality through strategic landscape planning. Offers flexibility in permissible land uses, but some authorisation may still be required for high-impact land uses.
No Natural Remaining	Areas that have been modified by human activity to the extent that they are no longer natural, and do not contribute to biodiversity targets. These areas may still provide limited biodiversity and ecological infrastructure functions, even if they are never prioritised for conservation action.	Manage in a biodiversity-sensitive manner, aiming to maximise ecological functionality. Offers the most flexibility regarding potential land uses, but some authorisation may still be required for high impact land uses.

Source: SANBI: Western Cape Biodiversity Spatial Plan Handbook, 2017

4.2.5 Water Resources

TWKM is made up of six catchment areas, namely the Palmiet River, Bot River, Theewaterskloof Dam, Sonderend River, Klein River and Sout River. These catchments fall within the jurisdiction of the Breede-Gouritz Catchment Management Agency.

A number of large surface water bodies are located within the Theewaterskloof Municipal area. This includes the Theewaterskloof Dam, the Eikenhof Dam, the Kogelberg Dam, the Bot River, the Palmiet River, the Swart River, the Sonderend River and the Klein River. Of particular importance is the Theewaterskloof Dam, which is the main water source for the City of Cape Town.

Currently the Western Cape is experiencing one of the most severe droughts in recorded history and therefore it is evident that water sources should be protected and preserved at all costs.

Not only does drought directly impact the agricultural sector but also the rest of the value chain which includes the agri-processing sector. Further to this, additional negative effects in the form of employment losses and lower exports are recorded.

In terms of water use, approximately 60% of water is used for irrigation purposes in South Africa. This means that efficient water use measures should be investigated in order to mitigate the decrease thereof. It is also evident that alien plant species may contribute to the increased inefficient use and supply of water. The removal of invasive plant species could result in land that could be utilised for farming purposes.

Table 4.4: Annual Dam Levels in and Around TWKM (2013 – 2017)

Dam	Capacity (ML)	2014 %	2015 %	2016 %	2017[3] %	2018 %
Berg River	130 010	100.1	89.2	72.0	65.0	96.5
Eikenhof	28 000	99.84	94.61	102.1	28.9	
Elandskloof	11 500	96.1	94.84	92.3	11.0	
Steenbras lower	33 517	96.8	88.1	67.5	45.5	79.3
Steenbras upper	31 767	99.7	94.5	96.1	100.2	60.4
Theewaterskloof	480 188	101.5	76.0	53.2	28.3	55.8

The Theewaterskloof Dam was at 53.2% capacity measured in November 2016. Due to the drought, one year later the dam was measured at 28.3% capacity. The level recovered since 2018.

[3] As at November 2017.

Figure 4.1: Dam Levels for Dams in and around TWKM (2013 – 2017)

Water supply has become an increasingly vivid obstacle as various aspects influence the supply thereof. In response, water restrictions have been introduced to ensure a sustainable supply. Therefore, it is proposed that alternative sources of water must be investigated in order to sustain future water demand.

The protection and preservation of water resources such as the Theewaterskloof Dam is beyond the responsibility of the TWKM. It is of provincial and national importance and should be prioritised likewise.

4.2.6 Drainage

TWKM is primarily drained by the Sonderend River, which generally flows in a west-to-east direction. The river's source is in the Hottentots-Holland Mountains and is fed by numerous tributaries draining the Riviersonderend Mountains.

The southern parts of TWKM are drained by the Palmiet, Bot and Klein Rivers, all

of which generally drain in a north-to-south direction.

4.2.7 Climate change

Climate change is likely to bring a combination of rising temperatures and reduced and erratic rainfall and therefore would have an impact on agriculture. The potential impact of climate change on water resources could also have an effect on agricultural practices.

One of the climate change threats in some parts of the Western Cape is the likelihood of floods with greater intensity and longer term impacts. There is likely to be increases in the severity and unpredictability of weather patterns. Flooding and storms are predicted which could have devastating effects on agricultural production.

In terms of adapting to climate change, the water system will need to be more robust and new/alternative sources of supply may need to be found. Increased skills will be required from water managers and long-term water projections are required.

4.2.8 Agriculture

At a district scale, the agricultural industries (apple, barley and canola production) not only contribute to the Gross Domestic Product per Region (GDPR) and employment of various sectors, but also to creating linkages between towns inside and outside the Overberg District (OBD).

In addition to providing food security, one of the OBD's largest fruit and vegetable export economies falls within the TWKM. Agriculture is an integral part of the TWKM economy and is the primary land use in the municipal area, with the western areas characterised by apple production and vast wheat and canola fields forming the central and eastern landscape of the municipal area.

Agriculture, forestry and fishing contributed 11.1% of the GDPR within the OBD in 2017 and is the dominant economic sector in TWKM (contributing 15.7% to the OBD GDPR). Similar to GDPR contribution, the agriculture, forestry and fishing sector provides the major source of employment opportunities in TWKM at 29.4% in 2017 (Municipal Economic Review and Outlook, MERO, 2019).

However, the high dependence on the agriculture, forestry and fishing sector for employment impacts the local economy in terms of spending by households, as workers in this sector are typically low-skilled and have lower levels of income. Employment is also seasonal for many workers which impact the supply and demand for goods and services from other sectors.

The main commodities farmed in TWKM and related hectarage is tabled below:

Table 4.5: Crop Classes and Related Hectarage

Commodity	Details	Hectares	%
Grazing	Fallow, lucerne, lupine, natural grazing, planted pastures perennial, small grain grazing, stubble, triticale	62 847.10	44.69
Cereals	Barley, maize, sorghum, wheat	48 742.33	34.66
Pome Fruit	Apples and pears	13 642.87	9.70
Vegetable Oil	Canola and sunflower	11 492.07	8.17
Grapes	Dried grapes, table grapes, wine grapes	1 828.65	1.30
Stone Fruit	Apricots, nectarines, plums, peaches	846.53	0.60
Fruit Other	Dates, figs, granadilla, guava, nuts, olives, persimmons, pomegranate, prickly pear	410.84	0.29
Vegetables	Artichokes, beetroot, potatoes, pumpkin, Brussel sprouts, corn, cauliflower, celery, chillies, tomatoes, onions, peas, etc.	295.25	0.21
Citrus/Sub-Tropical	Grapefruit, lemon, lime, naartjie, orange, mango, avocado	255.56	0.18

Commodity	Details	Hectares	%
Flowers	Cape rush, lavender, pincushions, proteas, roses, herbs and coriander, other unknown	185.69	0.13
Berries	Blackberries, blueberries, mulberries, raspberries, strawberries	83.64	0.06
Total		**140 630.5**	**100.0**

Source: http://www.elsenburg.com/gis/apps/agristats/

The table below reflects the main crops cultivated in the municipal area.

Table 4.6: Main Crops cultivated in TWKM

Rank	Crop	Area (ha)
1	Lucerne	42 150.5
2	Wheat	36 240.6
3	Barley	12 223.6
4	Canola	11 492.1
5	Apples	11 183.7
6	Planted Pastures Perennial	5 154.9
7	Small Grain Grazing	4 920.3

Source: http://www.elsenburg.com/gis/apps/agristats/

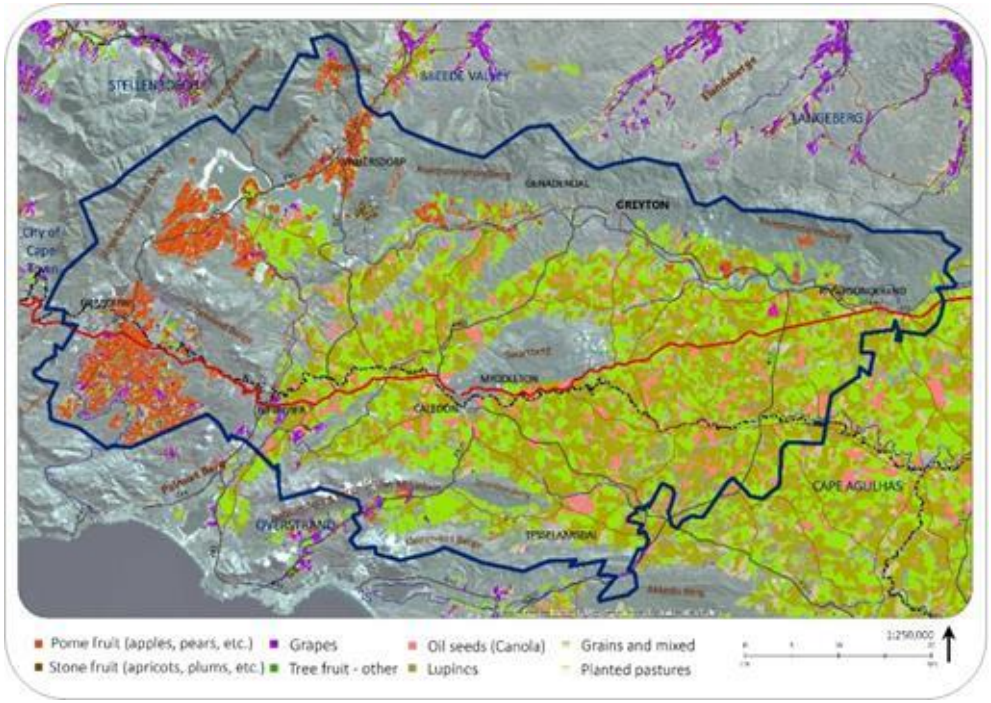

Figure 4.2: Distribution of Major Crops across TWKM

The majority of pack-stores/sheds are situated in and around Grabouw and Villiersdorp where pome and stone fruit crops are concentrated. The location of agri-processing plants correlates with the concentration of pome and stone fruit and produced products related to these fruits.

Other notable infrastructure include the South African Breweries Malting processing plant situated in Caledon and the mushroom processing plants located in Botrivier. Grain silos are distributed across the landscape where grains are farmed. Grazing land constitutes the bulk of the hectarage of agricultural land in the Municipal area (44%).

Table 4.7: Livestock reared in TWKM

Type (excludes poultry)	Count	%
Cattle	19 232	16.99
Goats	357	0.32
Horses	132	0.12
Pigs	2 065	1.82
Sheep	91 380	80.75
Total		**100.00**

The bulk of the livestock reared are sheep (80%), followed by cattle (17%).

4.2.9 Mining

Mining is not one of the main economic sectors within the Municipality. There are however few areas that are disturbed due to the sourcing of construction materials.

Precautionary measures must be put in place in order to manage the impact of this industry and to minimise the effect on the environment this could cause. For example, the source of construction materials should be situated as close to the development opportunities as possible. This minimises the impact on the transport network. River corridors and wetlands, including ephemeral pans, must be protected from urban, agricultural and mining activities. Special regard must be taken of conservation worthiness areas.

4.2.10 Biophysical Environment: Theme Implications

- The remaining fragments of vegetation within critically endangered ecosystems should be protected and are of national importance. Similarly, further loss of natural habitat within endangered ecosystems should be avoided and every attempt should be made to minimise the further fragmentation of the remaining natural habitat.
- Development next to, or along water courses are appropriate and will not jeopardise the sustainable water supply.
- The drought has also highlighted the importance of developing additional water sources as well as the harvesting of rainwater, where appropriate.
- It is advisable for TWKM to adopt a conservative approach to follow regarding the management of water sources. It is proposed that the following approach be adopted to mitigate and adapt to the impacts of climate change: encourage and support renewable energy generation at scale, develop integrated and sustainable settlements, improve inter and intra-regional accessibility, use regional infrastructure investment to leverage economic growth and diversify and strengthen the rural economy.
- High potential agriculture land should be protected and expanded on where appropriate.
- Agri-industrial activities should be supported in appropriate areas with regards to proximity to where the products being processed are cultivated, where the service network has capacity and where employment is available.
- Additional income generating measures should be supported on farms to supplement the farm's income, but without distracting from the primary agricultural activities.

4.3 UNDERSTANDING THE SOCIO-ECONOMIC ENVIRONMENT

The information in this section was sourced from the 2019 Municipal Economic Review and Outlook (MERO), drafted by the Western Cape: Department of Economic Development and Tourism.

Table 4.8: Theewaterskloof GDPR Performance per Sector, 2008 – 2017

Sector	Contribution to GDPR (%) 2017	R Million Value 2017	Trend	Real GDPR Growth (%)
			2008 – 2017	2018e
Primary Sector	15.8	1 289.1	2.0	-4.1
Agriculture, forestry and fishing	15.7	1 284.6	2.1	-4.1
Mining and quarrying	0.1	4.5	1.2	-2.2
Secondary Sector	24.5	1 995.8	3.2	2.7
Manufacturing	13.9	1 131.7	3.2	3.9
Electricity, gas and water	2.9	237.7	-0.9	0.6
Construction	7.7	626.5	5.1	0.8
Tertiary Sector	59.7	4 872.9	3.9	2.0
Wholesale and retail trade, catering and accommodation	17.9	1 458.0	3.8	1.6
Transport, storage and communication	10.9	886.9	2.8	1.6
Finance, insurance, real estate and business services	15.9	1 300.1	5.6	3.2
General government	8.4	687.8	2.6	1.1
Community, social and personal services	6.6	540.2	2.6	1.2
Total Theewaterskloof Municipality	**100.0**	**8 157.8**	**3.3**	**1.1**

The Theewaterskloof local economy is the most dominant local economy within the OBD, compared to Overstrand, Cape Agulhas and Swellendam municipalities; contributing 41.0% to the District's GDPR in 2017.

Table 4.9: GDPR Contribution and Average Growth Rates in relation to the District and Province (2017)

Contribution to GDPR (%) 2017		Trend	Real GDPR Growth (%)					
	2017	2008 – 2017	2013	2014	2015	2016	2017	2018e
TWKM	41.0	3.3	3.9	4.5	1.7	0.3	3.5	1.1
ODM	100	2.8	3.4	3.6	1.7	0.7	2.6	0.8
Western Cape	-	2.0	2.6	2.4	1.4	1.1	1.2	0.9

Source: Quantec Research, 2018 as contained in the MERO 2019

The dominating economic sectors in the TWKM are listed in the following table.

Table 4.10: Dominant Economic Sectors (2016)

Sector	Contribution to GDPR (%) 2017
Wholesale and retail trade, catering and accommodation	17.9
Finance, insurance, real estate and business services	15.9
Agriculture, forestry and fishing	15.7
Manufacturing	13.9

Source: Quantec Research, 2017 as contained in the MERO 2019

Economic growth in the Theewaterskloof area averaged 3.3% annum between 2008 and 2017, with a marked decreased to 1.1% in 2018. The decline in growth can be attributed to the contracting agriculture (partly due to the drought experience in that period), forestry and fishing sector and general decline in the tertiary sectors as a result of linkages to the agriculture, forestry and fishing sector as well as the overall weakening of the South African economy during the review period.

The only sector that has contracted annually (on average) was the electricity, gas and water sector. Increased pressure on bulk infrastructure due to a lack of water and increased demand from household and commercial consumers have added extra pressure on this sector, with the lack of funding available to address all needs.

According to the 2019 MERO, TWKM has the largest local economy in the District (larger than the Overstrand, Cape Agulhas and Swellendam municipalities' economies), contributing nearly R8.2 billion (41.0%) to the economy of the OBD. As previously indicated in **Figure 4.2** agricultural activities are the primary land use in the municipal area, with the western areas characterised by apple production, with vast wheat and canola fields forming the central and eastern landscape of the municipal area. In conjunction with having the largest local economy, TWKM also has the largest number of people employed in the OBD.

Of great concern is the current drought that the Western Cape has experienced. According to the Department of Agriculture, the estimated impact on the Province's Gross Value Added will be approximately R5.9 billion, representing an average production decline of around 20%. This in turn will lead to the loss of approximately 30 000 job opportunities within the agricultural sector. The above will have a very definite impact on an economy that is heavily reliant on the agricultural sector, as is the TWKM economy.

4.3.1 Sectoral Linkages across the Overberg District

The main economic sectors that contribute to the OBD economy have

interlinkages with each other, for example, the agricultural sector, which consists mainly of the barley, apples and canola industries, is well established and products are exported to other provinces and countries. It has linkages with the manufacturing sector regarding the processing of inputs or raw materials (i.e. apples, barley and canola) and the manufacturing of products (i.e. juice, canned foods, machinery, transport equipment, etc.). There are many alternating linkages between the various economic sectors in the OBD. These are the sectors which will negatively affect the economy if they had to disappear (i.e. canola, barley and apple production and all associated processing and tertiary sector support).

In addition, scenic routes link tourist destinations within the OBD (Refer to **Plan 4.3**). Tourism related development along these routes should be supported. However, development along these routes should be managed to ensure their scenic quality is protected.

4.3.2 Agricultural, Forestry and Fishing Sub-sector

The agriculture sector contributed R2.2 billion to the economy of the OBD and employed 21.6% of the OBD population (27 911 workers) and 29.4% of the TWKM population (17 840 workers) in 2017, with the largest contributing area being TWKM (MERO 2019). Wine grape production also occurs within the OBD with 2 724 hectares under wine grape cultivation in 2017. It can be noted that between 2013 and 2017, 524 ha less were under vine.

Backward linkages within the agriculture subsector include the activities of nurseries, who supply seedlings and young trees for expanding agricultural activities. Inputs such as fertiliser, packaging material and chemicals needed are available locally, although imported from the Cape Metro area. Farmers also require funding and insurance which forms part of the finance and business services sector. National and global impacts that have a positive or adverse impact on any facet of farming can therefore also influence the broader economy of the OBD.

4.3.3 Manufacturing

Manufacturing in the OBD is mainly focused on food and beverage production. Manufacturing contributed R2.7 billion to the OBD economy and employed 7.8% of the total OBD population (10 034 workers) and 7.2% of the total TWKM population (4 341 workers) in 2017. The manufacturing of barley, apples and canola into beer, juice, canned fruit and canola oil, etc. are the main contributors to the manufacturing sector within the OBD. Wine production also takes place in the Elgin Valley. **Table 4.11** presents the economic sectoral employment contribution for OBD and TWKM.

These enterprises supply food and beverages nationally which emphasises the importance of the agriculture sector, manufacturing sector and transport sector in the OBD. Manufacturers require a constant supply of electricity and water. If the manufacturing expands, additional industrial space is needed, highlighting the importance of spatial planning in the primary nodes of the OBD. Proper road infrastructure is needed to ensure that raw materials and finished products can be easily transported.

Wholesale and retail trade, catering and accommodation subsector (including informal trading). This subsector contributes R3.8 billion to the OBD local economy, with the main retail centres being in the Theewaterskloof area and the Overstrand area. This sector employed 22.5% of the total OBD population (29 135 workers) and 17.9% of the total TWKM population (11 581 workers) in 2017 (MERO 2019).

The largest proportion of informal workers in this sector is in the Theewaterskloof area. This sector is a main economic sector as it provides goods to local businesses and households. General changes in the economy will therefore also impact this subsector; if unemployment increases, spending will decrease having a negative impact on the wholesale and retail trade subsectors. In terms of the agriculture sector, inputs are purchased from within the OBD as well as from outside the OBD.

Apples/barley/canola and products produced from them are also sold locally within the OBD as well as across South Africa. Local apples/barley/canola products that are produced within the OBD does not only contribute to the local wholesale and retail sector but also to this sector in other provinces.

Table 4.11: OBD and TWKM Employment per Sector (2017)

Sector	Overberg District	TWKM
	% Contribution	% Contribution
Primary Sector	**21.6**	**29.4**
Agriculture, forestry and fishing	21.5	29.4
Mining and quarrying	0.0	0.0
Secondary Sector	**14.7**	**14.1**
Manufacturing	7.8	7.2
Electricity, gas and water	0.3	0.3
Construction	6.7	6.6
Tertiary Sector	**63.7**	**56.5**
Wholesale and retail trade, catering and accommodation	22.5	19.1
Transport, storage and communication	3.9	3.5
Finance, insurance, real estate and business services	15.5	13.9
General government	7.8	6.9
Community, social and personal services	14.0	13.0
Total:	**100**	**100**

Source: Quantec Research, 2017 as contained in the MERO 2019

4.3.4 Tourism

Tourism is not an economic sector on its own; however, the activities of tourists are captured in a variety of sectors, such as in the retail trade, catering and accommodation and the transport, storage and communication sectors. The majority of tourist activities are unrelated to the agriculture sector, which means it is an injection to the local economy. Tourists have a variety of needs such as accommodation, restaurants, vehicles and tours, creating opportunities for additional business development within the area to meet the needs of tourists.

According to the TWKM Informal Trading Management Framework 2017, the Municipality has not promoted enough of its attractions, notably the biodiversity and heritage offerings, for example:

- Dams are under-utilized attractions in the area due to limited public facilities;
- Birding opportunities are under-developed.
- The area offers a wealth of heritage resources, including:
  - Genadendal mission station with national monuments/heritage status;
  - The Botriver railway station, which is the first railway station to have been constructed outside of Cape Town;
  - Several Old Cape buildings and structures of the Old Cape Wagon and Slave Route;
  - Various museums at Villiersdorp, Caledon and Genadendal;
  - Cultural experiences such as home-stays, community tours with local guides, storytelling, Khoisan history, religious tourism and churches.
- Poor connections between the Genadendal offerings and the established tourism trade in Greyton or Elgin.

Plan 4.3 illustrates the identified scenic routes and tourism destinations within TWKM. The only new proposed tourism destination is the Botriver Railway Station Precinct. Additional tourism development should be encouraged and supported to enhance this important sub-sector. One initiative would be to formulate a tourism strategy to link TWKM with the Hemel-en-Aarde Valley wine route to capitalise on this existing tourism area.

4.3.5 Informal Trading

The informal trading situation in TWKM did not develop by design or by legal imperatives. In all towns of the world, poorer people are pressed by necessity to seek an income outside of formal businesses and outside of traditional employment.

Informal trading is a mechanism for survival and fulfils a gap that was left by previous planning that did not provide for spaces for economic activity in some towns. Currently, the largest part of the informal economy within the region is considered to be house shops / spaza shops and home industries. This is most likely due to the fact that home owners have access to an asset (their home) from which to conduct a business with no additional charges for business rental.

The nature of such ventures is usually rudimentary and would generally consist of the sale of goods that may be disposed of quickly and personal services. This would include:

- Prepared fast foods;
- Fresh fish, vegetables and fruit;
- Clothing, jewellery and craft items;
- Home-prepared preserves, jams, herbs and convenience items;
- Barbers and beauty salons.

Previous housing developments did not make provision for business opportunities. House shops and home industries arose as a convenience to the communities within which they operate.

It is not uncommon for municipalities to provide community facilities that people find inappropriate and inconvenient to their unexpressed needs. Such facilities quickly fall into disuse. Two examples are worth mentioning in TWKM:

- There are 11 trading stalls that have been provided in Riviersonderend but only 1 is in use;
- Botrivier has a demarcated trading area that has fallen into disuse.

The Informal Trading Management Framework 2017 therefore did not set aside spaces for informal trading in towns. Instead of setting aside informal trading spaces (and if people are already trading informally from houses or yards), it could be proposed to make provision by giving some limited form of economic development rights onto the existing residential rights.

4.3.6 Transport Sector

The transportation of goods within, to and from the OBD contributed R2.1 billion to the local economy in 2017; this includes transporting people within the municipal area. In 2017 this subsector employed 3.9% of the total OBD population (5 047 workers) and 3.5% of the TWKM population (2 133 workers) (MERO 2019).

The Cape Town Transport Corridor is the N2 National Road which passes through the main towns in the District. The weighbridge in Swellendam had 88 255 trucks pass through in 2014. These trucks traversing the area require fuel and food which further supports the local retail trade sector, thereby being an injection for the local economy.

4.3.7 Finance, Insurance, Real Estate and Business Service Sub-sector

This sector contributed R3.9 billion to the economy of the OBD in 2017, with the sector employing 15.5% of the OBD population (20 088 workers) and 13.9% of

the TWKM population (8 423 workers) in 2017.

This sector provides farmers, fruit/canola/barley processors as well as households and other businesses with the following services:

- Loans and banking;
- Marketing;
- Insurance;
- Legal and accounting services;
- Technical testing;
- Export agents for fresh fruit, barley, canola and processed fruit/barley/canola.

The main business nodes of the TWKM and the Overstrand areas are therefore critical in sustaining this sector which drives economic growth in the OBD.

4.4 THE POPULATION

4.4.1 Employment Growth

Table 4.12 indicates the trend in employment growth within each economic sector in the TWKM. Similar to GDPR contribution, the economic sectors that contributed the most to employment in the TWKM in 2017 was the agriculture, forestry and fishing sector (29.4%) and the wholesale and retail trade, catering and accommodation sector (19.1%). The finance, insurance, real estate and business services and the community, social and personal services sectors also made a relatively large contribution to employment, collectively contributing 26.9% to local employment.

The high dependence on the agriculture, forestry and fishing sector for employment impacts the local economy in terms of spending by households as workers in this sector are typically low-skilled and earn lower levels of income. Employment is also seasonal for many workers which impact the supply and demand for goods and services from other sectors. The agriculture, forestry and fishing sector lost 484 jobs during 2017/2018.

Table 4.12: TWKM Employment Growth per Sector, 2008 – 2017

Sector	Contribution to Employment (%) 2017	Number of Jobs 2017	Trend 2008 – 2017
Primary Sector	29.4	17 840	-8 170
Agriculture, forestry and fishing	29.4	17 830	-8 170
Mining and quarrying	0.0	10	0
Secondary Sector	14.1	8 528	2 274
Manufacturing	7.2	4 341	865
Electricity, gas and water	0.3	183	44
Construction	6.6	4 004	1 365
Tertiary Sector	56.5	34 192	11 027
Wholesale and retail trade, catering and accommodation	19.1	11 581	4 228
Transport, storage and communication	3.5	2 133	970
Finance, insurance, real estate and business services	13.9	8 423	3 244
General government	6.9	4 158	828
Community, social and personal services	13.0	7 897	1 757
Total TWKM	100	**60 560**	**5 131**

Source: Quantec Research, 2017 as contained in the MERO 2019

4.4.2 Unemployment

The table below presents the unemployment trend for TWKM, ODM and the Province. Note that the data do not include 'discouraged work seekers' or 'other not economically active' individuals. Including these would result in a much higher unemployment rate. The table shows that the unemployment rate has increased year-on-year since 2012, indicating that the number of employment seekers are increasing at a faster rate than the creation of employment opportunities within the Municipality, District and the Province. The rising unemployment rate is contributing to the increasing number of indigent households who need to be supported with free basic services and subsidized housing.

Table 4.13: Unemployment Rates, 2013 – 2018e (%)

	2013	2014	2015	2016	2017	2018e
TWKM	8.2	8.6	7.5	8.4	8.8	8.8
ODM	9.2	9.6	8.6	9.7	10.2	10.1
Western Cape	15.5	15.9	15.9	17.1	17.8	17.7

Source: Quantec Research, 2018 (e denotes estimate) as contained in the MERO 2019

4.4.3 Demographics

Demography was a challenging input in the drafting of this SDF. All municipalities in South Africa battle with the challenge of dated population statistics which are not reflective of the current realities faced by municipalities. TWKM is the most populous municipality in the OBD, estimated to comprise 42% of the total population within the District. This, in conjunction with the fact that the Municipality contributes approximately 41% of the District's Gross Domestic Product per Region makes an accurate understanding of population statistics and projections essential for the Municipality and the greater District. Accurate population projection figures, both at Municipal and settlement level, is essential in order to adequately project for and cost for future housing, engineering and social infrastructure investments for all spheres of government.

It was for this reason that the Department's Development Planning and Information Management Directorate, with the endorsement of the Western Cape: Department of Social Development undertook a thorough analysis of StatsSA data and drew from data from the following sources:

- Census 2001;
- Census 2011;
- 2006 Mid-year population estimates (MYPE);
- 2016 MYPE;
- 2017 MYPE;
- 2018 MYPE;
- Data on the geographic areas as obtained from https://census2001.adrianfrith.com/ and https://census2011.adrianfrith.com/

The attached TWKM data:

I. Use MYPE population data at District Municipality Level (2017 data set) to adjust Municipal total population from Census 2011 data, to sum and give the MYPE DM population total;

II. It then adjusts 2011 towns data to 2016 (the inter-census date) using observed individual town population and growth rates observed from 2001 to 2011, adjusted to sum to the MYPE 2016 data (published in MYPE 2017); i.e, it was assumed that the observed 2001-2011 growth continued for 5 years to 2016 proportionally across the TWKM. The 2011 to 2016 growth was then used to distribute Local Municipal growth to towns, where Local Municipal growth has been adjusted to coincide with MYPE DM data (2017);

III. Use the project team's adjustments to include/exclude urban structures (where known) to obtain settlement population and municipal urban rate;

IV. Use an urban rate (70.5% for TWKM in 2011) that is assumed to be constant into the future. This pushes up rural population as total municipal population grows, which is opposite to the observed trend from 2001 to 2011.

V. Projections beyond 2021 do not come directly from StatsSA (see note "r" in the spreadsheet), rather StatsSA's DM growth rate at 2021 (in MYPE 2017) was used and was projected forward. It is worth noting that a recent Department of Trade and Industry Migration Study (Aug 2018) has estimated the Western Cape total population at 7.9 million in 2030 whereas this projection show 8.2 million in 2028 (Department of Trade and Industry informally considers their number an "underestimate")

VI. MYPE 2018 (published end July 2018) only has a provincial total and no DM data, so the MYPE 2017 publication was used;

VII. MYPE 2018 has previously indicated the intention to provide municipal population estimates but it was not done.

Therefore, this data remains a 'work In progress' (as at 22 August 2018).

Through the piloting of the methodology to the TWKM SDF, the current (2018) population within the TWKM is estimated at 122 317. The population distribution is illustrated in more detail in the town analysis for each settlement in **Chapters 6 to 13**.

Table 4.14: Population Statistics

Captions (that follow after numbers):

"**a**" denotes "**actual**" i.e. actual Statistics South Africa (Stats SA) Survey total from Census (Cen.) or Community Survey (CS) for this municipality

"**b**" denotes "**back-estimate**" using known municipal average growth '01-'11 where no 2001 settlement data was available. "b" is similar to "c" below.

"**c**" denotes "**back-estimate**" using known settlement average growth '01-'11 where no 2001 sub-place data was available. "c" is similar to "b" above.

"**d**" denotes **District MYPE** data used to determine municipal popultion total for a given year based on known municipal growth rates from 2001-2011 collectively adjusted to correctly sum to a given District total.

"**e**" denotes "**estimate**" that assumes settlement growth 2001-2011 continued in the same proportions across all settlements to 2016's surveyed municipal total; Or other estimate for non-2016..

"**f**" denotes an unusual "**flier** or fluctuation" (as in outlier) at this data point, CAUTION, possible anomalous and likely NOT COMPARABLE in time-series. Note CS 2007 has unallocated data at District level.

"**g**" denotes a "**GIS**" aerial spot-count of structures to estimate household numbers for imputation of human population. Can be complimented by various recorded "ground-truthing". E.g. Bainskloof Village or Grabouw Pine North.

"**h**" is a spare cation to be used later if needed : -)

"**i**" denotes "**imputed**" usining a nearest neighbour. E.g. Hassie Square informal settlement in De Dooms (Cen. 2011) population 522 & 168 households hence ave. hh size was 3.11.Used to impute for other informal settlements.

A MYPE Adjustment factor (up or down) has been applied to the each Total Municipal Population in this District so that after the unique inter-Census growth rate for each muni was applied from Census 2011 onwards, all were then inflated/deflated togehther to get the District Total in MYPE.

"**s**" denotes "**settlement** aggregate or average has been used". Bold itelics will alert the reader to use of settlement rates. Also see "m" below.

"**m**" denotes "**municipal** average or aggregate has been used". Both "s" and "m" were used in absence of adequate data , or because the historic rate was deemed too high (above threshold of twice the municipal growth rate) & not sustainable.

Statistics South Africa / Western Cape DEA&DP

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Data Source: Statistics South Africa / Western Cape DEA&DP

Acknowledgements: www.adrianfrith.com; Google Earth; Gavin Miller WCG, Dept. Social Development.

Notes:

Abbreviations "**cbo**" is data "can be obtained"; "**dnk**" is "do not know"; **DU** denotes Dwelling Unit; "**na**" is "not applicable"; "**ncd**" is "no comparable data"; **p.a.** is "per annum". **MYPE** is Mid-Year Population Estimates by Sats SA.

k. **2016 Municipal boundaries** have been used to group settlement data for Census's 2001 & 2011. **Provincial, District, Municipal & Settlement data are** comparable across the time-series.

r. "**Rural**" data is similar to Stats SA's **"Non Urban" (NU)** except that NU may include some urban structures at the urban perifery that this data counts as settlement data when detected (also see "p" below).

p. Kindly **READ THIS ENTIRE DOCUMENT WITH** DEA&DP's Presentation to The IDP Manager's Forum on **"Population Estimates for IDP's"** (2018 06 07) which informs on methodology & prescribes **circumspection when using this data & projections.**

q These data are obtains from Stats SA MYPE Reporting (2017)

SETTLEMENT		2011 CENSUS	2016 MYPE		2018 MYPE (ESTIMATE)		2028 ESTIMATE		2011 HOUSEHOLDS	2011 HOUSEHOLD SIZE		p.a. 2001-2011		p.a. 2011-2016		p.a. ESTIMATE 2016-2023		p.a. ESTIMATE 2023-2028	
Botrivier		5505	6135	e	6477	p	8035	p	1579	3.5		0		0	e	0		0	
Caledon		13983	15583	e	16451	p	20410	p	3787	3.7		0		0	e	0		0	
Caledon		13020	14509	e	15318	p	19004	p	3546	3.7		0		0	e	0		0	
Middleton		963	1073	e	1133	p	1406	p	241	4.0		0		0	e	0	s	0	s
Genadendal		5663	6311	e	6662	p	8266	p	1593	3.6		0		0	e	0		0	
Grabouw		32897	36660	e	38703	p	48016	p	8270	4.0		0		0	e	0		0	
Grabouw	y	30337	33808	e	35691	p	44280	p	7706	3.9		0		0	e	0		0	
Pine North extra 1		498	555	e	586	p	727	p	131	3.8		na		0	e	0	s	0	s
Pine North extra 2		357	398	e	420	p	521	p	94	3.8		na		0	e	0	s	0	s
Iraq Informal Settlement		752	838	e	885	p	1098	p	198	3.8		na		0	e	0	s	0	s
Elgin	y	953	1062	e	1121	p	1391	p	141	6.8		0		0	e	0		0	
Greyton	z	2780	3098	e	3271	p	4058	p	990	2.8		0		0	e	0		0	
Riviersonderend		5245	5845	e	6171	p	7656	p	1483	3.5		0		0	e	0		0	
Villiersdorp		10572	11782	e	12438	p	15431	p	3654	2.9		0		0	e	0		0	
Villiersdorp		10004	11148	e	11770	p	14602	p	3461	2.9		0		0	e	0		0	
Villiersdorp ext.		447	499	e	526	p	653	p	144	3.1	i	na		0	e	0	s	0	s
Dennehof		121	135	e	142	p	177	p	49	2.5		0		0	e	0	s	0	s
Theewaterskloof Rural	r	32145	32145	e	32145	e	32145		7529	4.3		0		0	e	0		0	
Theewaterskloof Urban		76645	85414	e	90172	e	111871		21356	3.6		0		0	e	0		0	
Theewaterskloof Total		**108790**	**117558**	**e**	**122317**	**e**	**144016**		**28885**	**3.8**	**a**	**0**		**0**	**a**	**0**		**0**	

z. Greyton households 2001 includes 207 in Bosmanskloof. Surveyed together in 2011 as Greyton. Recommend display Greyton & Bosmanskloof separately.

y Recommeded that a breakdown of Grabouw into Previously Disadvantage Individuals (PDI) settlement areas and non-PDI areas be done.

i Imputed as a "nearest neighbour imputation" using Hassie Square De Doorns, and projected using observed municipal trend.

4.4.4 Household Income

The annual income for households living within the TWKM area is divided into three categories i.e. the proportion of people that fall within the low, middle and high income brackets. The following table presents the number of people per income bracket living in the OBD and TWKM (2017). The table also shows the projected number of people in each income bracket. Since an income trend could not be identified, the same percentage of the total population is used.

Table 4.15: Household Income

Income Range (2017)		OBD %	TWKM		
			%	People (2017)	People (2028)
Low Income	No income	12.6	11.8	14 812	16 994
	R1 – R6 327	2.2	2.0	2 586	2 880
	R6 328 – R12 653	3.6	3.4	4 232	4 897
	R12 654 – R25 306	14.6	17.3	17 163	24 915
	R25 307 – R50 613	21.2	23.1	24 922	33 268
Middle Income	R50 614 – R101 225	18.0	19.4	21 160	27 938
	R101 226 – R202 450	12.8	11.7	15 047	16 850
	R202 451 – R404 901	8.9	6.8	10 463	9 793
High Income	R404 902 – R809 802	4.3	3.3	5 055	4 753
	R809 803 – R1 619 604	1.3	0.9	1 528	1 296
	R1 619 605 – R3 239 208	0.3	0.1	353	144
	R3 239 209 or more	0.2	0.2	235	288
	Total:	**100.0**	**100.0**	**117 558**	**144 016**

Source: TWKM SEP 2016 (Provincial Treasury)

The table shows that approximately 57.6% of households in TWKM fall within the low income bracket, of which 11.8% have no income.

4.4.5 Poverty Headcount and Intensity

The poverty headcount shows that the number of poor people within the TWKM area increased from 2.8% of the population in 2011 to 3.6% in 2016. The increasing poverty headcount is a negative factor as it means more strain on municipal financial resources (**Table 4.16**).

The poverty level (i.e. the proportion of poor people that are below the poverty line within TWKM) increased from 42.9% in 2011 to 45.7% in 2016. This percentage is relatively high and should decrease as the income of more households within the TWKM area moves away from the poverty line. Currently, there are 4 479 households registered as indigent households with the Municipality. This, combined with an ageing population as is illustrated in **Table 4.17**, would result in an increased pressure on social grants and public services.

Table 4.16: Poverty Statistics

	Poverty Headcount %		Poverty Levels	
	2011	2016	2011	2016
TWKM	2.8	3.6	42.9	45.7
OBD	3.7	2.6	42.2	40.3
Western Cape	3.6	2.7	42.6	40.1

Source: TWKM September 2016 (Provincial Treasury)

Table 4.17: Age Cohort and Dependency Ratio

Year	Children: 0 – 14 Years	Working Age: 15 – 65 Years	Aged 65+	Dependency Ratio
2011	27 725	75 464	5 602	44.2
2017	29 559	80 685	7 413	45.8
2023	30 302	85 921	9 282	46.1

Source: TWKM September 2016 (Provincial Treasury)

4.4.6 Education Statistics

According to the 2017 MERO, TWKM has the largest proportion (19.5 per cent) of the total adult population with an educational achievement higher than Grade 12 and the lowest proportion of people without schooling (2.4 per cent) when compared to other local municipalities in the OBD, meaning TWKM has a relatively qualified workforce.

The retention rate for learners at Grades 10 to 12 in 2018 in schools within TWKM was recorded at 63.4% in 2018. The high level of high school drop-outs are influenced by a wide array of socio-economic factors including teenage pregnancies, the limited availability of no-fee schools, indigent households and unemployment (MERO, 2019).

The matric pass rate decreased from 90.9% in 2016 to 82.5% in 2018 (MERO, 2019).

Table 4.18: Education Levels of Population in TWKM in relation to the OBD (2017)

	TWKM		OBD	
Education Level	Number	% of Total Population	Number	% of Total Population
No schooling	2 690	2.4	18 244	7.5
Some primary	39 515	34.9	53 740	22.1
Complete primary	9 464	8.3	18 518	7.6
Some secondary	35 441	31.3	85 251	35.1
Grade 12	4 189	3.7	45 265	18.6
Higher	22 081	19.5	21 777	9.0
Total	113 380	100	242 795	100

Source: Quantec/Urban-Econ calculations as contained in the MERO 2017

4.4.7 Learner Transport

Currently in the TWKM, 39 learner transport routes serve 23 schools, transporting a total of 3 042 learners. Initial plans to curtail learner transport by the introduction of hostel accommodation at identified schools were met with opposition due to the associated challenges.

At this stage, it would seem as if the introduction of an integrated transport system in the ODM should be explored as a possibility. This will not only provide learners with access to schools via a subsidized transport system, but could also lead to affordable mobility of the economically active section of the ODM community to economic opportunity in the towns where most of the job opportunities are being created.

4.4.8 Health Statistics

The information below was sourced from the Socio-Economic Profile (SEP) 2017 MYPE.

(i) HIV/AIDS and tuberculosis

- TWKM's total registered patients receiving antiretroviral treatment is steadily rising from 1 373 patients in 2014 to 4 575 patients in 2016. These patients are treated at seven clinics or treatment sites. A total of 10 397 registered patients received antiretroviral treatment in OBD in 2016, of which 44.0% reside in the TWKM.
- The number of new antiretroviral patients decreased from 926 in 2015 to 774 in 2016.
- HIV transmission rate for TWKM also show a decrease from 0.5% in 2015 to 0% in 2016. This is on par with the OBD transmission rate of 0%.
- TWKM experienced a decline in tuberculosis cases from 1 100 patients in 2015 to 939 patients in 2016.

(ii) Child Health

- Of concern is that the immunisation rate in the TWKM has declined from 90.4% in 2015 to 64.1% in 2016. A campaign to promote immunisation could improve this situation.
- TWKMs malnutrition rate also increased from 2.7% in 2015 to 2.8% in 2016.
- The neonatal mortality rate in the TWKM has shown a decrease from 12.7 per 1 000 live births in 2015 to 7.7 deaths per 1 000 live births in 2016.
- The low birth weight indicator has decreased between 2014 and 2016 from 13% to 11%.

(iii) Maternal Health

- The maternal mortality rate has increased from zero in 2015 to 0.1 in 2016.
- The delivery rate to women under 18 years (teenage mothers) has decreased from 9.3 in 2015 to 8.4 in 2016.
- The termination of pregnancy rate remains steady at 0.4 for 2015 and 2016.

(iv) Emergency Medical Services

- Access to emergency medical services is critical for rural citizens due to far rural distances between towns and the need for health facilities being much greater than in the urban areas.
- 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.
- Provision of more operational ambulances can provide greater coverage of emergency medical services. TWKM had 1.2 ambulances per 10 000 inhabitants in 2016 which was below the district average of 1.5 ambulances per 10 000 people. This has however increased to 3.9 per 10 000 people in 2017.

(v) Existing Health, Education and Other Social Infrastructure

The Draft Social Infrastructure Accessibility Study for TWKM was prepared by the Department of Transport and Public Work's Directorate: Infrastructure Policies and Strategies in 2018.

The study provides an overview of existing social infrastructure requirements, planned infrastructure delivery and identifies those facilities required to meet the population needs by 2028, which support the resolution of a range of

developmental challenges facing the Municipality. Ultimately the study findings seek to influence future planning of the provincial social sector departments and the Municipality's planning processes through User-Asset Management Plans and the TWKM SDF.

The analysis from this study has been incorporated in the town level analysis which follows in **Section 6 to 13**.

4.4.9 Socio-Economic Environment: Theme Implications

- The TWKM is the most dominant local economy in the OBD, with the tertiary sectors contributing the largest proportion of the GDPR. This, combined with a relatively qualified work force, would enable economic and urban growth within TWKM with the necessary public and private investment.
- The SDF must ensure that there is sufficient available and strategically located land for the development of economic generating activities, as well as streamlining the statutory processes to achieve development rights.
- The SDF must ensure sectoral linkages between the towns within the TWKM to strengthen the overall and individual town's economic power.
- The ageing population and increased unemployment levels will increase the pressure on social grants and public facilities. Combined with the projected population growth, the demand for social facilities will increase. The SDF must address the estimated need for additional social infrastructure and ensure available land and public funding.

4.5 UNDERSTANDING THE BUILT ENVIRONMENT

4.5.1 Transportation Network

Information for this section was sourced from the Local Integrated Transport Plan for TWKM (ITP, 2016) as well as from recent inputs from the South African National Roads Agency (SANRAL). Refer to **Plan 4.4** for the main transportation network within TWKM.

(i) The N2 National Road and SANRAL

The N2 is the primary road-based link running through the TWKM, representing 8% of the road network within TWKM. The national road network is the responsibility of SANRAL, who has a mandate to finance, manage and maintain the national road network.

SANRAL indicated that the following projects have been designed for TWKM:

- The first intersection leading to Main Road, Botrivier (gravel road) will be closed and an underpass will be provided;
- The only access to Botrivier will be via the existing interchange and will be upgraded;
- Internal roads within Botrivier will be built parallel to the railway line;
- The toll project (Botrivier) is cancelled, but the design is still fixed.

Committed SANRAL projects include:

- Special Maintenance between Gordon's Bay T-junction and Houw Hoek Pass;
- Improvement between Caledon and Riviersonderend;
- Periodic maintenance between Riviersonderend and Swellendam (planned commencement in second quarter of 2017 in already acquired road reserve).

Planned SANRAL projects are:

- Ad Hoc maintenance between Botrivier and Caledon (planned commencement in second quarter of 2018);
- New internal roads to be designed for Botrivier.

(ii) Traffic Volumes along the N2

The TWKM has the highest traffic volumes out of the four local municipalities within the ODM. The main route sections with the highest Average Annual Daily Traffic (AADT) volumes and Annual Average Daily Truck Traffic (AADTT) volumes for the N2 National Road are listed in **Table 4.19** below.

The highest AADT in the TWKM is found on the N2 section between Gordon's Bay and Grabouw with 12 500 vehicles per day with around 9% of the traffic being heavy vehicles. Some of the high demand for the N2 before Grabouw can be attributed to the high demand for Hermanus. Traffic volumes between Caledon and Swellendam ae around 3 500 vehicles per day.

Table 4.19: Traffic Volumes along the N2

Road Description	Length (km)	AADT	AADTT	% Heavy Vehicles
N2 Sir Lowry's Pass	11.2	16 207	1 485	9.2
N2 Grabouw - Botrivier	29.2	12 500	1 135	9.0
N2 Botrivier - Caledon	54.3	7 500	715	9.6
N2 Caledon - Riviersonderend	24.2	3 100	400	12.9

Source: SANRAL CTP 2013 yearbook as contained in the Draft Theewaterskloof ITP (2016)

(iii) Provincial Roads

Provincial roads are classified into four categories according to their function namely trunk roads, main roads, divisional roads and minor roads. These

secondary and tertiary roads cater mainly for intra-provincial travel and are largely the responsibility of the provincial government. The main provincial roads within TWKM is the R43 (Villiersdorp-Botrivier), R45 and R321 (Grabouw-Villiersdorp), R406 (Caledon-Greyton-Riviersonderend) and R316 (Caledon to Napier) Roads.

(iv) Traffic Volumes on Provincial Roads

The highest AADT along the TWKM provincial road network is found on the R43 between Hawston and Botrivier, the bulk representing traffic to Hermanus. Refer to **Table 4.20** below.

Table 4.20: Traffic Volumes along Provincial Roads

Route	Road Link Description	AADT	AADTT	% Heavy Vehicles
R43	Hawston - Botrivier	9 100	700	7.7
R44	Pringle Bay - Botrivier	4 500	200	4.4
R316	Caledon - Napier	2 500	250	10.0
R321	Grabouw - Villiersdorp	2 500	400	16.0
R43	Caledon - Villiersdorp	2 200	350	15.9
R43	Worcester – Villiersdorp	1 300	150	11.5
R406	Caledon - Greyton	1 100	100	9.0

Source: WCG RNIS, January 2015 as contained in the Draft Theewaterskloof ITP (2016)

4.5.2 Freight Transport

Freight transport is the physical process of transporting commodities and merchandise goods and cargo for commercial purposes. The movement of freight is fundamental to almost all economic activity, be it agricultural, infrastructure development, energy production or general industry.

There are two main freight routes within the ODM. Firstly, the N2 National Road which transports freight along the east-west axis along the coast of South Africa, primarily between East London and Cape Town. The second freight corridor within the ODM, but outside of TWKM, is the Worcester-Swellendam link along the R60 and railway line.

Currently, more than 95% of all freight is moved via road while it is expected that more than 90% of all freight will continue to be moved via road in 2019. Further consultation with Transnet Freight Rail confirmed that TFR does not foresee any rail network improvements over the next 20 years to accommodate freight movement. The existing rail network is deemed adequate to accommodate the expected increase in rail freight in the next 20 years.

The negative effect of a high proportion of heavy vehicles on provincial and national roads is the slowing of traffic, causing hazardous situations.

4.5.3 Public Transport

The local public transport services in TWKM enable people to access destinations which cannot be reached on foot or by other modes of non-motorised transport (NMT). These destinations include essential services or activities such as places of employment, shops, government services, hospitals, clinics and schools.

TWKM comprises of a few small towns and low-density settlements. Most of these settlements are linked to the towns of Grabouw and Caledon, which serve as the main service centres and public transport hubs in TWKM.

Public transport accounts for approximately 18% of total trips in TWKM, while 46% walk and 36% use private vehicles to reach their destinations. This can be as a result of the extreme difference in income levels within the Municipality.

Currently, Minibus Taxis (MBT) is the dominant public transport mode for both commuter and long-distance services. Population densities are relatively low in TWKM and this reduces the cost effectiveness of bus services. Most bus services

that operate in TWKM are for learners, forming part of the Department of Education's contracted services for learners. There are limited scheduled long distance bus services and no commuter rail services exist in TWKM. A breakdown of public transport services operating in TWKM is contained in the table below.

Table 4.21: Description of Modes of Public Transport Services in TWKM

Mode	Type of Trips
MBT	Commuter, learner, health, long distance
Bus	Learner transport, affordable and luxury long distance coaches
Commuter Rail	None

According to the ITP, public transport expenditure in TWKM constitutes on average approximately 17% of households' monthly income, which is most likely due to longer travel distances in the local municipality, making public transport costs relatively higher in TWKM.

(i) Minibus Taxi Operations

The Minibus Taxi (MBT) is the dominant public transport mode in TWKM primarily due to its flexibility and ability to adapt to different passenger demands between towns and more remote rural 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.

MBT services operating from the towns in the ODM are administered by several MBT associations based in larger towns in the ODM. There are three taxi associations in TWKM namely Overberg Taxi Association in Caledon, Grabouw Taxi Association in Grabouw and the Villiersdorp Taxi Association in Villiersdorp.

(ii) Routes and Ranks

Currently, TWKM has one formalised MBT rank situated in Grabouw. No formal taxi rank exist in Villiersdorp or Caledon. Generally, MBTs utilise on-street parking bays or parking lots at retail stores. The identification of these rank locations was based on discussions with MBT association representatives. There are currently four informal MBT ranks that operate within TWKM, two of which are located in the towns of Caledon and two located in Villiersdorp. MBT services are limited in TWKM with 17 routes operating from the town of Caledon, Grabouw and Villiersdorp to surrounding areas such as Rooidakke, Slangpark, Uitsig, Bergsig and Myddleton.

Surveys undertaken for the ITP showed that limited local Grabouw routes, i.e. from town to surrounding low income residential areas such as Pine View, Melrose, Council and Rooidakke and to surrounding towns i.e. Vyeboom and Villiersdorp are operational during weekdays.

Similarly, the surveys also show limited weekday service for local routes from Villiersdorp and Caledon, while other services in and to surrounding towns were more operational on weekends. The highest demand for MBTs occurs on Saturdays, especially at the end of the month. The longer distance MBT service is to Bellville, Somerset West and Khayelitsha.

Typically, a route is linked to a particular informal rank or departure point. For example, the Plein Street rank in Caledon only has service to Greyton and Genadendal. MBT movements in and out of the towns in TWKM, as observed from rank surveys, are summarised in the table below.

The table shows that TWKM has an active public transport network with a number of longer distance or regional services to towns in surrounding local municipalities, as well as more localised services within TWKM. Grabouw and Villiersdorp serve as the transport hubs in TWKM with most of the routes originating or terminating in these towns.

Most of the towns or settlements in TWKM, such as Caledon and Villiersdorp,

tend to be small with predominantly low income households. Most daily activities within the town can usually be accomplished on foot or bicycle which impacts the demand and affordability of motorised travel in these smaller towns. However, the distances between towns tend to be farther, approximately 15 to 30 km, making motorised transport essential for these types of trips.

Table 4.22: Destination Points of Taxi Services

Origin	Local Destinations	Locations Outside TWKM
Caledon	Uitsig/ Bergsig and Chickama	-
	Greyton/Genadendal	
Villiersdorp	Goniwe Park	Franschhoek
	Ellisdrome	Worcester
	Kamp	Bellville
Grabouw	Farms	Kleinmond
	Caledon	Khayelitsha
	Council/ Rooidakke/ Pineview	Somerset West
	Vyeboom/ Villiersdorp	-

During the week, Grabouw is the town with the highest number of active MBT facilities. The Grabouw MBT rank in Oudebrug Street is the most active, contributing to approximately 49% of weekday passenger demand.

The Cathcart Street MBT rank in Caledon is the least active during the week contributing only 5% of the weekday passenger demand.

Other facilities displaying high levels of MBT activity are the Villiersdorp MBT rank, contributing to approximately 46% of weekday passenger demand.

On an End of Month Friday, the Grabouw MBT rank again contributes to the highest passenger demand of 62%. On weekends including the All-Pay day, the MBT ranks in Villiersdorp and Caledon become less active with MBT passenger movements to and from these towns. The areas have largely farming as the main economic activity, and farm owners usually transport their workers on a Saturday by means of farm trucks and bakkies to town centres to carry out shopping, banking, and other such functions.

Generally, passenger waiting time is reasonable in TWKM, with passengers waiting on average 15 minutes for a MBT..

Routes in TWKM are well used during the week, with most routes operating at an average of 66% of peak service capacity. High MBT route activity was observed at the Grabouw MBT facility and Villiersdorp MBT facility during the peak. At these rank facilities, a MBT at full capacity departs every 12 minutes for local routes and every 30 minutes for longer distance routes during the peak hour. The highest passenger demand was observed at the facility in Theewaterskloof, where approximately 56 passengers were observed commuting to local areas in Grabouw during the peak hour.

MBT route activity is significantly higher on weekends in TWKM, with additional routes operating out of Grabouw and Caledon. Increased MBT activity was observed between Villiersdorp and Goniwe Park, Grabouw and Somerset West, Villiersdorp and Grabouw, where an additional 150 passengers utilise the Grabouw-Pine View route on weekends. All routes, except for Caledon, are operating at well over 90% of peak service capacity.

(iii) Commuter Bus Services

The commuter bus services in TWKM operate from Grabouw. These buses mainly serve the farming communities around Grabouw.

(iv) Long Distance Bus Services

Commercial bus services that operate through TWKM are Inter Cape, Greyhound, and Baz Bus. Most of TWKM residents need to use MBT services or private transport to access these long distance bus pick-up points. The Cape Town-Port Elizabeth routes can be accessed at Hermanus and Swellendam, while the Cape Town-Durban routes can be accessed at Caledon, Riviersonderend and Swellendam.

The services operate daily with five buses per day between Cape Town and Johannesburg, one bus between Cape Town and Durban (Greyhound), three buses between Cape Town and East London/ Mthatha and one bus between Cape Town and Port Elizabeth (Baz Bus).

(v) Commuter Rail Services

There are no rail line services for commuters in TWKM. **Plan 4.4** illustrates the location of the rail lines in the region. Although there is a rail line running through TWKM, it is currently only used for rail freight and as a tourism route.

(vi) Non-motorised Transport

The national Non-Motorised Transport (NMT) typically includes walking, cycling and variants such as small-wheeled transport.

Animal-powered forms of transport (horse-drawn carts and horse-riders for example) are also included in this definition and are still widely used in most rural areas in TWKM.

The NMT environment in TWKM has poor quality infrastructure and lack of direct and continuous routes. As there is no NMT network, existing NMT routes within the road environments are often not sociable, poorly maintained, seldom used and suffer from the infiltration of crime.

This is often due to poor infrastructural planning, lack of integrated design approach and difficulties experienced in managing public spaces. Sidewalks are often not surfaced and NMT users tend to use the road and are therefore exposed to high safety risks.

Many communities are challenged with either public transport being too expensive or access to public transport being limited or even non-existent.

This leaves people and learners to walk long distances to their destinations. This increasing trend is illustrated through figures from the National Household Transport Survey (2013) that indicate that NMT usage in TWKM for going to work is high at 40%, as illustrated in the table below, following a similar trend at a district level.

Table 4.23: Main Mode of Transport to Work (Depicted as a Percentage)

Mode of Transport	TWKM	ODM
Bus	14	8
Private transport	36	37
Taxi	4	5
Train	0	0
Walking all the way	40	46
Other	5	4

4.5.4 Regional Engineering Infrastructure

(i) Solid Waste Management

The Western Cape Integrated Waste Management Plan (2017 – 2020) is the relevant policy pertaining to waste management in the Western Cape. Waste management is the mandate of each municipality. Each municipality is mandated to budget adequately for waste management sites.

All landfill sites in the TWKM have reached capacity and all, except Caledon, are

no longer accepting waste. The closure of a landfill site requires a closure license as well as rehabilitation. In order for a landfill to be closed properly, closure must be preceded by rehabilitation in order to ensure that the site is environmentally acceptable. The DEA&DP's Assessment of the Municipal Integrated Waste Management Infrastructure report for the Overberg District (2016) provided an assessment of the waste management facilities in the Municipality and made recommendations and cost estimations related to interventions that facilities would require in order being compliant. In addition, the Municipality commissions a Landfill Closure Provisions Study annually which determines the rehabilitation costs of the Caledon, Genadendal, Greyton, Riviersonderend and Villiersdorp waste disposal sites.

Where landfill sites have reached capacity, Refuse Transfer Stations or Public Drop off points have been established or the planning thereof is underway. These stations/ points act as holding areas until waste is transported to the Karwyderskraal regional landfill site. The Botrivier drop off site and the Grabouw Refuse Transfer Station still remain in operation. More details are provided in town level analysis in **Part 2: Chapters 6 to 13**.

Other concerns with respect to waste management within TWKM are:

- Support is required with respect to the collection of pesticides/ hazardous waste from farming areas;
- The rapid growth of informal settlements and the ability to provide services to these settlements is a major concern.

(ii) Regional Landfill Sites

The Karwyderskraal regional landfill site is situated in the ODM and is shared between Theewaterskloof and Overstrand Municipalities and is managed by the ODM. The ODM, Overstrand Municipality and TWKM signed a Service Level Agreement for the Karwyderskraal Landfill Site in 2018. In terms of the agreement, the ODM will construct a new cell (4th cell) in the landfill site and maintain the landfill site to ensure that ODM and other interested parties and local municipalities in the Overberg Regional District have a facility to dispose of general waste. TWKM will contribute to the capital cost of the 4th cell, which is estimated to be R48 million. The estimated useful lifespan of the whole Karwyderskraal landfill site is estimated to be 55 years and the SLA will commence once the new cell in the landfill site is completed.

According to estimates, the new cell will be able to take approximately 200 000 tons of solid waste. At the current growth rate, the new cell will therefore, take approximately eight years to fill before a new cell will have to be commissioned.

The IWMP highlighted compliance issues with some facilities and costed approximate investment required for the rehabilitation of facilities in order to become operationally compliant. TWKM has appointed a service provider to draft a Landfill Closure Provisions Report in which the costs are updated annually. Details from the latest report are contained in the town level analysis component of this report.

(iii) Potable Water

The only regional bulk water infrastructure located within the TWKM area is the water tunnel from the Theewaterskloof Dam, which supplies water to Cape Town via Franschhoek.

(iv) Sewerage

There is no regional bulk sewerage infrastructure. Each formal settlement treats its own wastewater.

4.5.5 Settlements

For the purpose of categorising the settlements within the TWKM area, the following three different approaches where considered.

(i) 2012 TWKM SDF Classification

In terms of the 2012 TWKM SDF, settlements become categorised as nodes when a settlement does not only provide for its own functions, but also towards the needs of surrounding towns, as its economic base is founded on the support of the surrounding settlements. The hierarchy of a settlement is determined by the nature of its functions.

A higher order function (i.e. regional hospital) with a large threshold level (minimum population to support a function) and a wide influence sphere (range of goods - the maximum travel distances to make use of a service/ function) that are located within a settlement will therefore theoretically increase its central function and its hierarchy. Therefore, a higher order function is associated with the greater number of people dependent thereon.

Considering the above, there are eight settlements within TWKM considered as nodes on the basis of their geographic location and interconnected services.

Table 4.24: Settlements and their Roles and Functions

Settlement	Role and Function
Caledon/ Myddleton	Sub-regional node, administrative centre and agricultural service centre
Grabouw	Sub-regional node and agricultural service centre
Villiersdorp	Local node and agricultural service centre
Riviersonderend	Local node
Greyton	Local node
Botrivier	Rural node
Genadendal	Rural node
Tesselaarsdal	Rural node

Caledon and Grabouw can be considered as sub-regional nodes with the largest services reach and providing the highest order services in TWKM.

(ii) Classification of Towns as per Provincial Spatial Development Framework (2014)

In terms of the PSDF, towns are classified based on their respective populations. Considering the projections that were done in **subsection 4.4.3** of this chapter, in terms of the PSDF model, the settlements within TWKM can be classified as follows:

Table 4.25: Settlement, Population Size and Classification

Settlement	Population (2018e)	Settlement classification and associated thresholds as per the PSDF and CSIR Guidelines
Grabouw	41 035	Primary Regional Service Centre 20 001 – 70 000
Caledon	16 157	Secondary Regional Service Centre 5 001 – 20 000
Villiersdorp	12 852	
Botrivier	6 626	
Riviersonderend	6 518	
Genadendal	6 432	
Greyton	3 470	Rural Settlements with thresholds to support permanent social services 1 000 – 5 000

(iii) Growth Potential of Towns Study Classification

The GPS 2014 determines the growth potential and socio-economic needs of

settlements in the Western Cape using quantitative data. The results were combined to identify potential interventions that might unlock latent potential within settlements and regions.

The following table depicts settlement growth potential in terms of the findings of the GPS 2014. The GPS 2014 also includes a socio-economic needs index, in addition to the growth potential of settlements and municipalities. Both Grabouw and Caledon are highlighted as a high growth potential settlement with a high socio-economic needs index base. Settlements with a high growth potential and high socio-economic needs base can be considered prime development and investment opportunities, as well as socio-economic development imperatives.

Table 4.26: Settlement and Ranking in terms of Growth Potential and Socio-Economic Need

		Socio-economic Need				
		Very Low	Low	Medium	High	Very high
Growth Potential	Very Low					
	Low					
	Medium	Greyton	Botrvier Genadendal Riviersonderend	Villiersdorp		
	High			Caledon	Grabouw	
	Very High					

At municipality level, TWKM is rated as having a high growth potential rate (65).

(iv) Conclusion: Settlement Classification used in this SDF

For the purposes of this document, it was decided to adopt an approach that takes all three methodologies into consideration. Based on this approach, the settlements within the municipal area are classified in the following table.

Table 4.27: TWKM Settlement Classification

Settlement	Settlement Classification
Caledon Grabouw	Primary Regional Service Centre
Villiersdorp Botrivier Riviersonderend Greyton	Secondary Regional Service Centre
Genadendal	Rural Nodes
Tesselaarsdal Kaaimansgat Vygeboom Nuweberg Dennegeur Elgin Orchards Kromvlei Lebanon Velapi Molteno Theewaterskloof Country Club Dennehof	Rural Settlements

Helderstroom Krige Stasie Lindeshof Rietpoel	

(v) Rural settlements

The TWKM rural landscape is characterised by dislocated and isolated residential pockets which are mainly clustered farm worker housing. The 2012 TWKM SDF, in the absence of a better description, first described these pockets of houses grouped together as rural settlements in the document. Some of these residential pockets have developed more than others and some may include schools, shops, sport fields etc.

The origin of most of these rural settlements can be attributed to the existence and dependence of people on natural resources; the primary economic activities such as agriculture and forestry. A characteristic of these rural settlements is that they do not reflect the variety of land use categories of higher order nodes.

These developments typically include mostly residential land uses, with little or no diversification or specialisation of other land use categories (i.e. business, community facilities). In addition, the majority of rural settlements currently have poor access to job opportunities and basic services.

There are several rural settlements situated within TWKM, which are included in the table above. The majority of these settlements are private settlements.

(vi) Functions of Rural Settlements

Given the low level of diversification of non-residential land uses, little if any of the rural settlements contain functions of which the threshold value and influence sphere overlap with the functions of other rural settlements. The rural settlements contain lower order facilities and therefore have vital links to urban settlements in order to meet local needs for services, household goods and certain community facilities.

The following concerns were first raised in the 2012 TWKM SDF and remain relevant:

- High level of dependency of all rural settlements upon road linkages to higher order settlements for essential services;
- Scattered location of rural settlements as shown by distances between settlements indicates that virtually none of the functions of rural settlements overlap;
- The hinterland south of Caledon contains no other higher order urban functions;
- The locational disposition of rural settlements means that the residents are highly dependent on transport (MBTs) and a relatively high proportion of disposable income is spent on transport.

(vii) Housing Need

The Long Term Financial Plan (2019, LTFP) concluded that TWK is under financial pressure. One of the key focus areas that has a major impact on the long-term financial sustainability is the disproportionate growth in number of low-income earning individuals that reside in TWKM. In this regard, the LTFP states that "*an effective model dealing with service delivery to a disproportionate growing portion of low income households, fast growing settlements and land invasion is called for and the municipality is busy responding to this challenge by approaches to formalising informal settlements, providing 'sites and services' within a realization that the pace of providing housing given the demand will present a major challenge*".

In order to partly address this problem, the LTFP states that "*Of specific importance for future growth estimates is the growth specifically at the sites that are not constrained by physical or geographic barriers. A concerted effort*

should be made to limit the influx of people to these sites."

In order to counter-balance this financial burden, the LTFP recommends that "*To partially counter the negative impact of the growth of "low income residents", a focused strategy to attract higher income residents needs to receive priority. The location of TWK on the N2, within just over an hour from the international airport, as well being part of the natural beauty of the Overberg, should be utilised to attract people looking for retirement villages or accommodation that is more affordable, yet close to the urban centres with associated services, such as medical centres. Utilising available land that is assets of the municipality to provide impetus to a partnership with developers, should be an option*".

Table 4.28 presents the current (2018) overall housing need in TWKM. As can be seen, there are 22 informal settlements located within TWKM, with almost half located in Grabouw. Almost half of the total number of individuals on the waiting list is also located in Grabouw. This represents a major financial implication for Grabouw to provide for the needed housing and social facilities.

There are also 1 468 farm workers on the current waiting list. These farm workers would either need to be accommodated within the towns or within agri-villages.

To address the above housing need, TWKM has identified a number of housing projects on their housing pipeline. **Tables 4.29 to 4.35** below lists each identified housing project per settlement. The SDF has allocated sufficient land for these projects within each settlement.

Table 4.28: TWKM Housing Need (2018)

Town	Informal Settlements	Number of Informal Structures	Number of Backyarders	Number of Farm Workers Registered
Caledon	1	627	700	88
Grabouw	10	4 161	524	592
Villiersdorp	8	2 315	706	623
Botriver	1	389	257	89
Riviersonderend	1	142	640	68
Greyton	1	52	246	8
Total:	**22**	**7 686**	**3 073**	**1 468**

Table 4.29: TWKM Housing Pipeline (Review 2018/2019): Caledon

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Caledon Erf 703 (Side Saviwa Hostels)	CRU	80 units	future	0%	Unknown	2 years
Caledon Erf 1 (Uitzicht)	IRDP	893 sites & 500 units	future	0%	2023/2024	8 years
Caledon Side Saviwa 3 Stage 1 & 2 (Riemvasmaak) (Phase 1)	UISP/IRDP	378 sites & units	future	0%	2023/2024	5 years
Caledon Erf 1 Site F1 (Phase 2)	IRDP	552 sites	future	0%	Beyond 2025	4 years
Caledon Erf 1 (Bergsig)	GAP/FLISP	237 units	future	33%	Beyond 2025	4 years
Caledon Erf 282 Myddleton	GAP/FLISP	80 sites & units	future	33%	Beyond 2025	4 years

Table 4.30: TWKM Housing Pipeline (Review 2018/2019): Grabouw

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Grabouw Rooidakke (1169 services)	UISP	1 169 sites	Current	80%	Current	2 years
Grabouw Rooidakke - Rainbow (1169 units)	PHP	1 169 units	Current	80%	Current	3 years
Rooidakke Extension Iraq	UISP (175) IRDP (281)	456 enhanced sites	current	100%	Current	2 years
Grabouw Hillside (438 services)	UISP	438 sites	current	100%	Current	2 years
Grabouw Hillside (438 units)	PHP	321 units	current	100%	Current	2 years
Grabouw Waterworks (Beverly Hills) Erven 505, 545 & 793 (404 services & 404 units) (Phase 2)	UISP	404 sites	current	50%	Unknown	8 years
Grabouw Waterworks (Beverly Hills)	UISP/PHP	164 sites & units	current	100%	2019/2020	1 year
Grabouw Two A Day	IRDP/FLISP	1 156 sites & units	future	0%	2021	TBD
Grabouw Gypsie Queen	IRDP/FLISP	300 sites & units	future	0%	2020	TBD
Grabouw (Rooidakke Extension) Portion 1 of the Farm 292 and Portion 4 of Farm 301 (7000 services)	IRDP	7 000 sites	Future	33%	2019/2020	TBD
Siyayanzela	UISP	Unknown	future	0%	Beyond 2025	TBD

Table 4.31: TWKM Housing Pipeline (Review 2018/2019): Villiersdorp

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Villiersdorp Farm 24 West Side (195 services)	UISP	195 sites	future	0%	Unknown	Unknown
Villiersdorp Radyn Farm 24 (120 services & 120 units) and ERF 2819 (Caravan Park - 200 services & 200 units)	IRDP/FLISP	320 sites & units	future	0%	2020/2021	8 years
Villiersdorp Portions 1, 22, 32 & 72 of Farm 72 (Destiny Farm)	IRDP/UISP	2 305 sites & units	future	50%	2022/2023	13 years
Villiersdorp Farm 24 (Phukom and Goniwe)	UISP	500 sites & units	future	0%	2023/2024	5 years

Table 4.32: TWKM Housing Pipeline (Review 2018/2019): Botrivier

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Botrivier Erf 1351	IRDP/FLISP	25 sites	future	33%	2023/2024	4 years
Botrivier Erf 1212	IRDP	26 sites	future	16%	2023/2024	4 years
Botrivier Beaumont-Land Purchase- Portion 51 of Farm 436		N/A	Current	0%	2020/2021	5 years
Botriver: New Frans Extension (Beaumont Portion 51 or Farm 436)	IRDP	TBD	future	0%	2020/2021	5 years

Table 4.33: TWKM Housing Pipeline (Review 2018/2019): Riviersonderend

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Riviersonderend Erf 289 (Joe Slovo)	UISP	172 sites & 138 units	current	100%	2016/2017	3 years
Riviersonderend Infill	IRDP	11 sites & units	current	66%	2015/2016	2 years
Riviersonderend Erf 289 Site Phase 1 (224 services)	IRDP	224 sites	future	0%	Beyond 2025	3 years
Riviersonderend Erf 289 Site Phase 2 (729 services)	IRDP	729 sites	future	33%	Beyond 2025	TBD
Riviersonderend Erf 459 (200 services & 200 units)	IRDP	200 sites & units	future	16%	Beyond 2025	5 years

Table 4.34: TWKM Housing Pipeline (Review 2018/2019): Greyton

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Greyton Erf 595 (GT1)(20 services & 20 units)	GAP/FLISP	127 sites	future	16%	2023/2024	3 years
Greyton Portion of Erf 595	IRDP	165 enhanced sites	future	0%	2021/2022	TBD
Greyton Erf 1787 Site Phase 1 (55 services)	GAP/FLISP	55 sites	future	33%	Beyond 2025	TBD
Greyton Erf1786 Site Phase 2 (19 services)	GAP/FLISP	19 sites	future	33%	Beyond 2025	TBD
Greyton Erf 595 (GT1)(20 services & 20 units)	GAP/FLISP	20 sites & units	future	16%	Beyond 2025	TBD

Table 4.35: TWKM Housing Pipeline (Review 2018/2019): Genadendal

Project Name	Programme	Housing Opportunities	Project Status	Readiness	Construction Year	Duration
Genadendal greater Farm 39 (250 services)	IRDP	250 sites	future	16%	Beyond 2025	12 years
Genadendal Erf 1999 Site Phase 1 (16 services)	IRDP	16 sites	future	16%	Beyond 2025	3 years
Genadendal Erf 1897 Site Phase 2 (20 services)	IRDP	20 sites	future	16%	Beyond 2025	3 years

(viii) Restructuring Zones

The Social Housing Act of 2008 defines a restructuring zone as: "*restructuring zone means a geographic area which has been; (a) identified by the municipality, with the concurrence of the provincial government, for purposes of social housing; and (b) designated by the minister in the Gazette for approved projects*".

Restructuring via social housing seeks to achieve three main dimensions of restructuring:

- Spatial restructuring by bringing lower income people into areas where there are major economic opportunities (both with respect to jobs and consumption). Indirectly, social housing contributes to spatial restructuring by increasing densities and compacting growth thereby ensuring that the poor are not pushed out to marginal locations at the edge of settlements;
- Social restructuring by promoting a mix of socio-economic groups;
- Economic restructuring by promoting spatial access to economic opportunity and promoting job creation via the multiplier effect associated with building medium density housing stock.

Social housing is targeted by Government to address a specific segment of the market through a combination of the following:

- Rental market;
- Household income level of R0 – R15 000 per month;
- Development of social housing by non-profit companies registered at the Social Housing Regulatory Authority.

In terms of the Social Housing Act, TWKM needs to initiate, identify and motivate these restructuring zones. These areas should be well located in terms of access, community facilities, economic activities and employment opportunities. Grabouw and Villiersdorp are proposed as restructuring zones for TWKM, given the current and estimated future housing need.

4.5.6 Built Environment: Theme Implications

- TWKM is strategically located with regards to the N2 National Road and the R43 and R44 Provincial Roads, which traverse the municipal area. The TWKM should take advantage of the passengers and cargo passing through on these roads and ensure that the mobility of these roads are maintained and enhanced.
- TWKM should create an optimal environment for developers to invest in employment generating enterprises.
- TWKM has a large housing backlog, which puts a financial pressure on the Municipality in terms of service delivery.