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Stellenbosch Local Municipality: Capital Expenditure Framework

Development of a Long-term Financial Plan and Capital Expenditure Framework in line with the provision of system driven support for integrated development planning, project prioritisation, budgeting, implementation and performance monitoring.

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Version: Draft_6.00
22 May 2019

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Foreword

This document contains the first-generation CEF for Stellenbosch Local Municipality. It will be tabled for approval by the Stellenbosch Local Municipality before formal submission to the Department of Cooperative Governance and Traditional Affairs (COGTA).

The draft document was submitted to COGTA to serve as evidence of the preparation of a CEF as a grant requirement for release of the first tranche of funding from the IUDG on 1 July 2019. The planned submission date to COGTA of the draft document was 31 March 2019, and the expected submission date for the final Stellenbosch Local Municipality CEF is 31 May 2019.

The principles of integrated planning have been incorporated into many municipal strategies and sector plans over the past decade. The implementation of these plans and strategies however, remains a challenge. The intersection between the complexity of integrated planning at local government level, the need for technological tools to simplify this complexity, and the need for a framework to move towards an improved planning and delivery model has led to the development of the Capital Expenditure Framework (CEF) concept.

The role of a CEF is to provide a framework which coordinates the outcomes of a multitude of planning initiatives and documents at local government level. This is to ensure that capital investment and project / programme implementation is guided by an over-arching, long-term strategic, spatial, financial and socio-economic logic. Key informants to the CEF are:

- the national and provincial strategies and policies (i.e. the NDP and Medium Term Strategic Framework (MTSF);
- the Provincial SDF or Growth and Development Strategy (GDS));
- municipal-level policies and strategies, typically embodied by the Integrated Development Plan (IDP), and;
- Spatial Development Frameworks (SDF) and other departmental sector plans.

Collectively these plans provide a spatial framework that local government must use to guide investment and development in order to realise short, medium and long-term developmental and socio-economic goals.

The CEF on its own is not the only mechanism that should enable integrated urban development. The intention of the CEF is to serve as a catalyst to streamline programme- and project-level preparation, prioritisation and implementation, and to overcome hierarchical and silo-based approaches.

As the first CEF for Stellenbosch Local Municipality and one of the first CEFs in South Africa, this document sets Stellenbosch Local Municipality on a new planning approach and development path towards improved cross-sectoral integrated planning, comprehensive investment needs assessment, long-term financial planning and multi-criteria project prioritisation and budgeting.

Disclaimer

This document contains forward looking statements. While due care has been used in the preparation of forecasted information, the actual outcomes may differ from the forecasts. Whilst reasonable care was taken in the development of this document, forecasts and recommendations made in this document may be influenced by external factors or events that may occur subsequent to the development of this document, or by information or events that may not have been disclosed or known and therefore not incorporated at the time of the development of this document. The reader is therefore cautioned not to place inappropriate reliance on forward-looking statements.

The information presented in the report is based on data that was provided by the municipality and other data that was obtained from provincial and national sources that are in the public domain. Consequently, the document may be less relevant to any other party or at a different time and under different circumstances. The author does not warrant or guarantee that there will be no change to relevant facts and circumstances in the future or that future events or outcomes will transpire.

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Table of Abbreviations

AFS	Annual Financial Statements
CBD	Central Business District
CEF	Capital Expenditure Framework
CEIP	Capital Expenditure Implementation Plan
CIF	Capital Investment Framework
CLS	Community Library Services
COGTA	Cooperative Governance and Traditional Affairs
CPM	Capital Prioritisation Model
CRC	Current Replacement Cost
CRR	Capital Replacement Reserves
DORA	Division of Revenue Act
DRC	Depreciated Replacement Cost
EIM	Economic Impact Module
EUL	Economic Useful Life
FA	Functional Area
GDP	Gross Domestic Product
GDS	Growth and Development Strategy
GVA	Gross Value Add
ICDG	Integrated City Development Grant
ICM	Intermediate City Municipality
IDP	Integrated Development plan
IIIF	Integrated Infrastructure Investment Framework
INEP	Integrated National Electrification Programme
IUDF	Integrated Urban Development Framework
IUDG	Integrated Urban Development Grant
LOS	Level of Service
LTFS	Long-term Financial Strategy
MFMA	Municipal Finance Management Act
MRRI	Municipal Revenue Risk Indicator
MSA	Municipal Systems Act
MSCOA	Municipal Standard Chart of Accounts
MTREF	Medium Term Revenue Expenditure Framework
MTSF	Medium Term Strategic Framework
NDP	National Development Plan
NDPG	Neighbourhood Development Partnership Grant
PDA	Priority Development Area
PTIS	Public Transport Infrastructure Systems Grant
RUL	Remaining Useful Life
SALGA	South African Local Government Association
SAPS	South African Police Services
SEZ	Special Economic Zone
SDF	Spatial Development Framework
SFA	Sub-functional Areas
SIG	Social infrastructure Grant

SIPDM	Standards for Infrastructure Procurement and Delivery Management
SPLUMA	Spatial Planning and Land use Management Act
STATSSA	Statistics South Africa
USDG	Urban Settlement Development Grant

Section 1 Introduction



1 Introduction

1.1 Legislative context of a Capital Expenditure Framework

1.1.1 The Constitution of South Africa

The term “Capital Expenditure Framework” (CEF) became a municipal mandate with the promulgation of the Spatial Planning and Land Use Management Act, Act 16 of 2013 (SPLUMA) section (21)(n). However, the concept of a Capital Investment- or Capital Expenditure Framework has been eluded to in several other preceding legislative and policy instruments. The legislative context is best understood when considering a brief history of municipal planning, with specific reference to IDPs, SDFs, and Municipal Budgeting. To understand the evolution of municipal planning in this context, the point of departure is the Constitution of South Africa.

Section 153 of the Constitution of South Africa states that a municipality must structure and manage its administration, budgeting and planning process to prioritise basic needs and to promote social and economic development. The Constitution instructs municipalities to have a developmental focus and that this should be achieved through the planning- and budgeting processes.

1.1.2 Municipal Planning Processes

The Local Government Transitions Act (Act 209 of 1993) was the first act stating that a municipality should compile an IDP - it did however not define the content or nature thereof.

The Local Government Transitions Act Second Amendment (Act 97 of 1996) then defined an IDP as a plan aimed at the integrated development and management of the area of jurisdiction of a municipality. Section (10)(c) specifically showed that IDPs would promote rational and developmentally oriented budgeting, monitoring and tracking of development. A similar definition of an IDP was included in the Local Government Municipal Structures Act (Act 117 of 1998). This definition further underlined the inter-relationship between the planning and budgeting process.

The Local Government Municipal Systems Act (MSA) (Act 32 of 2000) was a successor to the Local Government Municipal Structures Act (Act 117 of 1998). The MSA was deemed the most important statute furthering all aspects of integrated development planning. Chapter 5 of the act is titled “Integrated Development Planning” and provides that municipalities must undertake developmental-oriented planning. This is to ensure that the objectives of local government and its developmental duties (as set out in the constitution) are achieved.

The act states that an IDP is the principal, single, inclusive and strategic planning instrument of a municipality. One of the objectives of the IDP is to align the resources and capacity of the municipality with implementation of the plan. This forms the policy framework and general basis on which annual budgets must be based, and should be compatible with national and provincial development plans and planning requirements. The core components and content of an IDP must reflect the following:

- The municipality’s vision for its own long-term development of the municipality;
- An assessment of the existing level of development in the municipality;
- The municipality’s development priorities and objectives;
- The municipality’s development strategies;
- The municipality’s SDF;

- The municipality's operational strategies;
- An applicable disaster management plan;
- A financial plan, and;
- Performance indicators and performance targets.

In section (5)(1)(a) of SPLUMA (Act 16 of 2013), it is stated that municipal planning consists of the compilation, approval, and review of an IDP. SPLUMA further states in Part E (20)(2) that the municipal SDF must be prepared as part of a municipality's IDP in accordance with the provisions of the MSA (Act 32 of 2000).

Section 21 of SPLUMA prescribes what the content of a municipal SDF must be. Section 21(n) is of particular importance as it states that a municipal SDF must determine a CEF for the municipality's development programmes, depicted spatially.

1.1.3 Municipal Budgeting Processes

The Municipal Systems Act (Act 32 of 2000) states that an IDP must consist of a financial plan. The Municipal Planning and Performance Management Regulations (Regulation 2 of 2001) describes the details of such a financial plan and states in section (3) that the financial plan in a municipality's IDP must:

- Include budget projections;
- Indicate the financial resources that are available for capital project developments, and;
- Include a financial strategy that defines sound financial management and expenditure control, as well as ways and means of increasing revenues and external funding for the municipality and its development priorities and objectives.

After the MSA (Act 32 of 2000) defined what should be done in terms of the IDP and financial planning, the Local Government: Municipal Finance Management Act (MFMA) (Act 56 of 2003) was established to secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government and to establish treasury norms and standards for local government. The MFMA (Act 56 of 2003) was revised in 2011 and redefined its aim to enable improved processes of municipal planning budgeting, allowing for more informed decisions.

In order to achieve the aim of the MFMA (Act 56 of 2003), the MFMA prescribes the typical content of municipal budgets in chapter 4. In section 17(3)(b) the act states that when an annual budget is tabled it must be accompanied by measurable performance objectives for revenue from each source and for each vote in a budget, taking into account the municipality's IDP. This means that a municipal budget cannot be drafted in isolation of the IDP. Furthermore, section 21 of the act states that a mayor must co-ordinate the processes for preparing the annual budget and for reviewing the municipality's IDP in order to ensure that the tabled budget and the IDP are mutually consistent and credible.

Section 7(1) of the Municipal Budget and Reporting Regulations states that policies that affect or are affected by the annual budget of a municipality should include a policy related to a Long-term Financial Plan.

1.1.4 The relationship between the planning and budgeting processes

From the legislative context provided in this section, the following municipal mandate imperatives are highlighted:

- That the Constitution of South Africa demands planning and budgeting processes in local government (Constitution of South Africa, Act 108 of 1996);
- That the Constitution of South Africa demands local government to be developmental and resource efficient (Constitution of South Africa, Act 108 of 1996);
- That an IDP is deemed as the principal, single, inclusive and strategic planning instrument of a municipality and that it should comprise of a financial plan as well as a SDF (Municipal Systems Act, 32 of 2000);
- That the municipal budgeting process cannot stand alone from the IDP process (Municipal Finance Management Act, 56 of 2003), and;
- That the SDF must contain a CEF that is spatially referenced (Spatial Planning and Land Use Management Act, 16 of 2013).

In April 2016 Cabinet approved the Integrated Urban Development Framework (IUDF). The IUDF is coordinated by the Department of Cooperative Governance (COGTA). The IUDF capital programme requires alignment by participating municipalities wishing to access the Integrated Urban Development Grant (IUDG). This required alignment should be achieved through the development of a long-term CEF, with a 10-year planning horizon. According to the 2018 COGTA guideline on preparing a CEF, a CEF is the outcome of strategic prioritisation within the available affordability envelope of a municipality, based on a long-term financial plan. Furthermore, the CEF must:

- Translate the priorities identified in the SDF, into capital programmes;
- Promote long-term infrastructure planning;
- Promote infrastructure planning that is better integrated across sectors and spheres and within space, and;
- Promote a more integrated approach to planning within municipalities that brings together technical, financial and planning expertise.

1.2 The role of the CEF in relation to the IUDF

The IUDF is a policy initiative of the Government of South Africa, coordinated by COGTA, which seeks to foster an understanding between local government and civil society on how best to manage urbanisation and achieve the goals of economic development, job creation and improved living conditions within municipalities.

The IUDF marks a new deal for South African cities and towns and sets a policy framework to guide the development of inclusive, resilient and liveable urban settlements, while addressing the unique conditions and challenges facing South Africa's cities and towns. It advocates the effective management of urbanisation so that the increasing concentration of an economically active population translates into higher levels of economic activity, greater productivity and higher rates of growth, thereby transforming our South African cities into engines of growth and prosperity.

The key outcome of the IUDF is spatial transformation. The identified policy levers and priorities (refer to Figure 1) are crucial for maximising the potential of urban areas, by integrating and aligning investments in a way that improves the urban form. The CEF is therefore the recommended mechanism for local government to achieve spatial transformation by aligning capital investment in such a way that the key outcomes of the IUDF are achieved.

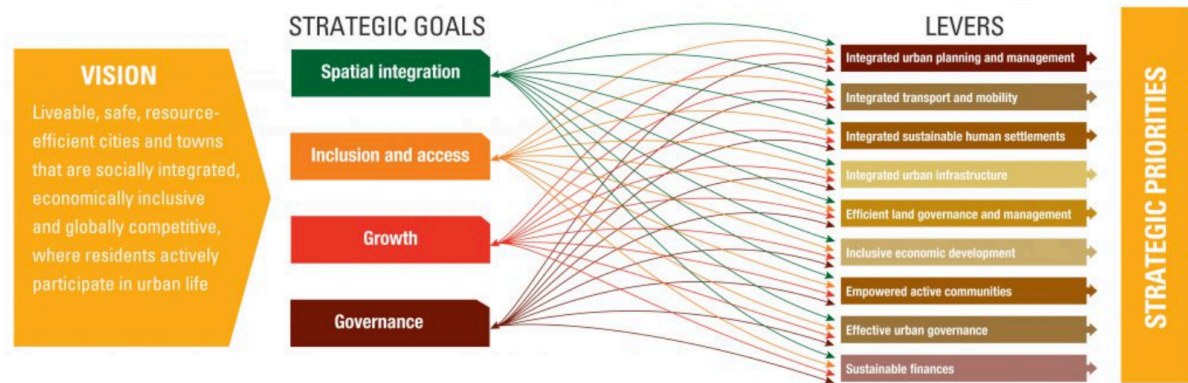


Figure 1: Core elements of the IUDF

1.3 The role of the CEF in relation to the IUDG

A review of Local Government Infrastructure Grants was initiated in October 2013, led by National Treasury together with the COGTA, the Financial and Fiscal Commission, the South African Local Government Association (SALGA), and the Department of Performance Monitoring and Evaluation. The review envisioned a grant system that should include:

- Greater differentiation in the type of grants provided to different municipalities;
- A move from focussing on rolling out new infrastructure to increased focus on the management, maintenance and renewal of existing infrastructure;
- An approach to ensure greater value for money for the funds spent, and;
- A framework to provide coherence and consistency in the management of the grant system.

The IUDF is consistent with-, and reinforces the findings of the Review of Local Government Infrastructure Grants. As a result, the IUDG is slated to be introduced in the 2019/20 Division of Revenue Act (DORA) as a consolidated grant for Intermediate City Municipalities (ICMs)¹. The aim of the IUDG is to support spatially aligned public infrastructure investment that will lead to functional and efficient urban spaces and to ultimately unlock urban growth. In terms of the IUDG description, the purpose of the grant is to:

- Provide funding for public investment in infrastructure for the poor;
- Promote increased access to municipal owned sources of capital finance in order to increase funding for public investment in economic infrastructure;
- Ensure that public investments are spatially aligned with the local government development vision, and;

¹ Intermediate City Municipalities was defined by COGTA through the IUDF programme.

- Promote the sound management of the assets delivered.

According to the IUDG policy framework, a CEF is a comprehensive, high-level, long-term infrastructure plan that flows from a SDF, which estimates the level of affordable capital investment by the municipality over the long-term. The CEF is therefore the municipal instrument to realise the agenda of the IUDF.

1.4 The role of the CEF

A Capital Expenditure Framework is a consolidated, high-level view of infrastructure investment needs in a municipality over the long-term (10 years) that considers not only infrastructure needs but also how these needs can be financed and what impact the required investment in infrastructure will have on the financial viability of the municipality going forward.

Guide to preparing an Infrastructure Investment Framework, SALGA, 2017, page 2

The role of a CEF is to frame the outcomes of a multitude of planning documents within the municipality in order to ensure that implementation is guided by a strategic, spatial, financial and socio-economic logic. A CEF serves not only as a performance evaluation mechanism, but also as a rationale towards capital investment planning that provides business intelligence, data validation, project synchronisation and prioritisation. Furthermore, the role of the CEF is to strengthen the process currently institutionalised within the municipality, and to show how capital investment matures from planning to implementation through various stages of governance.

The primary outputs of the CEF can be best understood in terms of the process flow shown in Figure 2 below:

- Firstly, prior to subjecting projects applying for budget to a prioritisation and budgeting process, the municipality must first identify all capital demand or needs that are required over the long-term within their jurisdiction, irrespective whether the capital demand stems from local, provincial or national spheres of government. The Integrated Infrastructure Investment Framework (IIIF) or Capital Investment Framework (CIF) therefore aims to gather the long-term capital demand required for the municipality to function optimally.
- The next step is to consolidate the capital demand into one synthesised plan depicted spatially, along with all the budget reform requirements emanating from the MFMA and National Treasury (i.e. SIPDM project life-cycle planning, mSCOA segments etc.).
- The SDF is then unpacked to identify the spatial vision as well as the functional areas and priority development areas for the municipality in order to prepare a socio-economic and developmental profile for the municipality.
- The socio-economic and developmental profiling serves as a primary input to the demand quantification and setting of programmatic long-term infrastructure investment targets required realise the spatial vision of the municipality.
- The spatial development vision of the municipality, along with other strategic, financial, policy, socio-economic and technical objectives are used to prepare a prioritisation model in order to rank or score capital demand (projects) based on their alignment to the spatial, strategic, financial, policy, socio-economic and technical objectives of the municipality.

- The process of setting up a budget for the CEF draws from the outcomes of the long-term financial plan whereby the affordability envelope and the optimal funding mix for capital investment for the municipal is modelled based on key socio-economic and population growth projections. Once the affordability envelope is known, the 10-year capital budget can be prepared with inputs from the project prioritisation results.
- The final step in preparing the CEF is to define an implementation programme for the medium term – in line with the Medium Term Expenditure Framework (MTEF). The medium-term implementation plan of the CEF is known as the Capital Expenditure Implementation Programme (CEIP) which is essentially the first three budget years of the 10-year Capital Expenditure Framework.

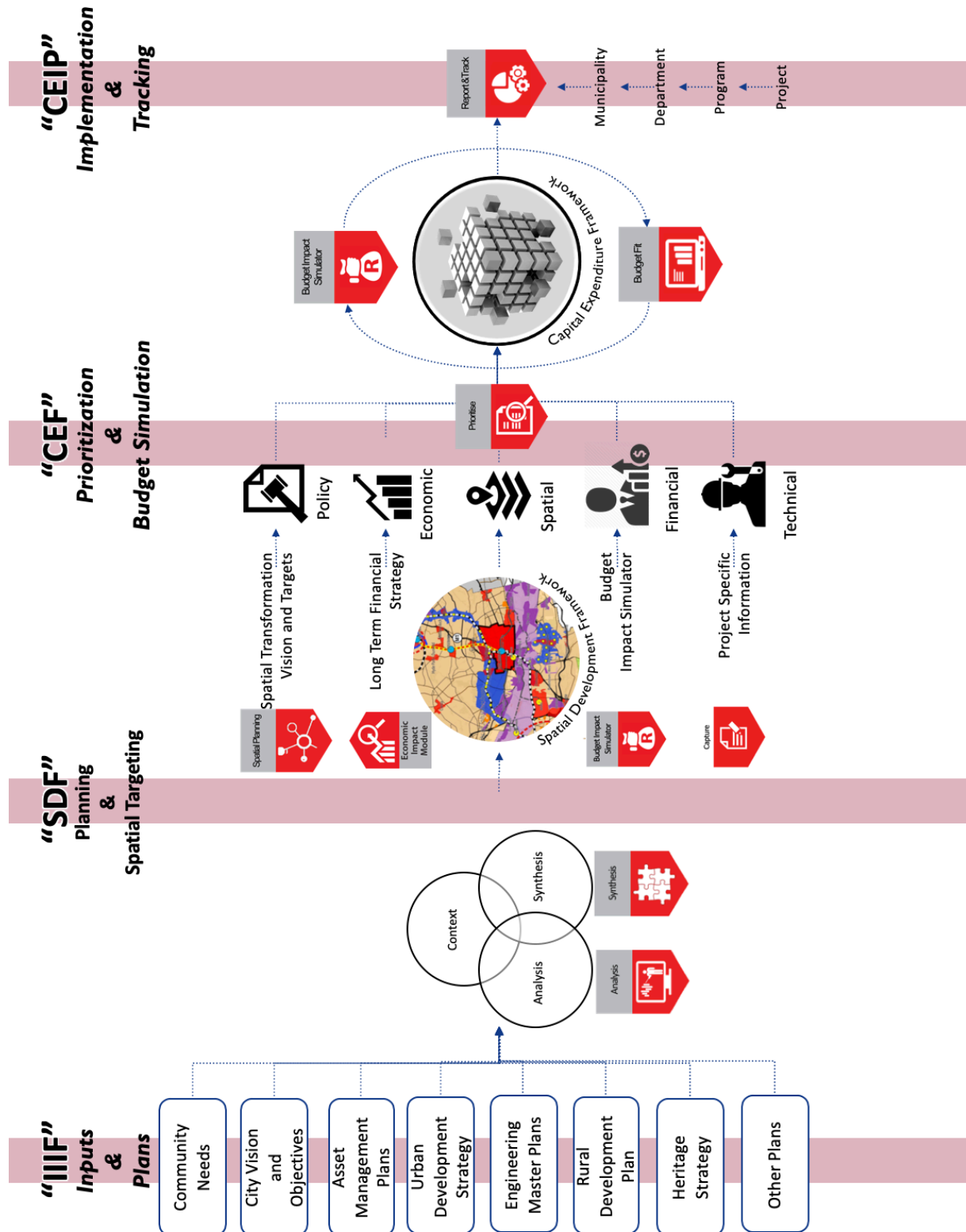


Figure 2: The role of the CEF in relation to other internal processes

1.5 Roll-out of the IUDG

In 2016, Cabinet adopted the IUDF which positions intermediate sized municipalities and towns (ICMs). The IUDF is coordinated by COGTA, which has set up the institutional arrangements for the coordination of activities across government departments and agencies, under the overall management of an IUDF Working Group.

The IUDF ICM programme, targeting 39 municipalities, is intended to provide support for the municipalities in the middle size and density range of cities and towns. The purpose of the ICM support strategy is to help translate IUDF policy into practical programmes of action. In so doing the initiative aims to give impetus to achieve the main IUDF goals, which are forging new integrated forms of spatial development; ensuring that people have access to social economic services, opportunities and choices; harnessing urban dynamism to achieve inclusive and sustainable growth; and enhancing the governance capacity of the state and citizens in ICMs.

One element of the implementation of the IUDF is the introduction of the IUDG. The 39 ICMs are all eligible for the IUDG as from the 2019/20 financial year. The IUDG is a three-year capital programme that must be aligned with a long-term Capital Expenditure Framework (CEF). This CEF must be developed by each ICM in order to qualify for the IUDG.

Stellenbosch Local Municipality is one of a handful of municipalities that have been approved for the IUDG funding application for the 2019/20 budget cycle, under condition that the municipality prepare and submit a draft CEF to COGTA by 31 March 2019 and submit a final CEF to COGTA by 31 May 2019.

1.6 CEF Planning Method and Guidelines

1.6.1 CEF project preparation, prioritisation and budgeting process

The planning approach towards developing this CEF was to draw on the information obtained from the municipality, the institutional arrangements within the municipality, and the guidelines provided from the IUDF on the content of a CEF.

- Figure 3 below depicts the integrated planning and budgeting process that was implemented using the CP3 system at Stellenbosch Local Municipality to facilitate the process of project preparation, prioritisation and budget scenario development.

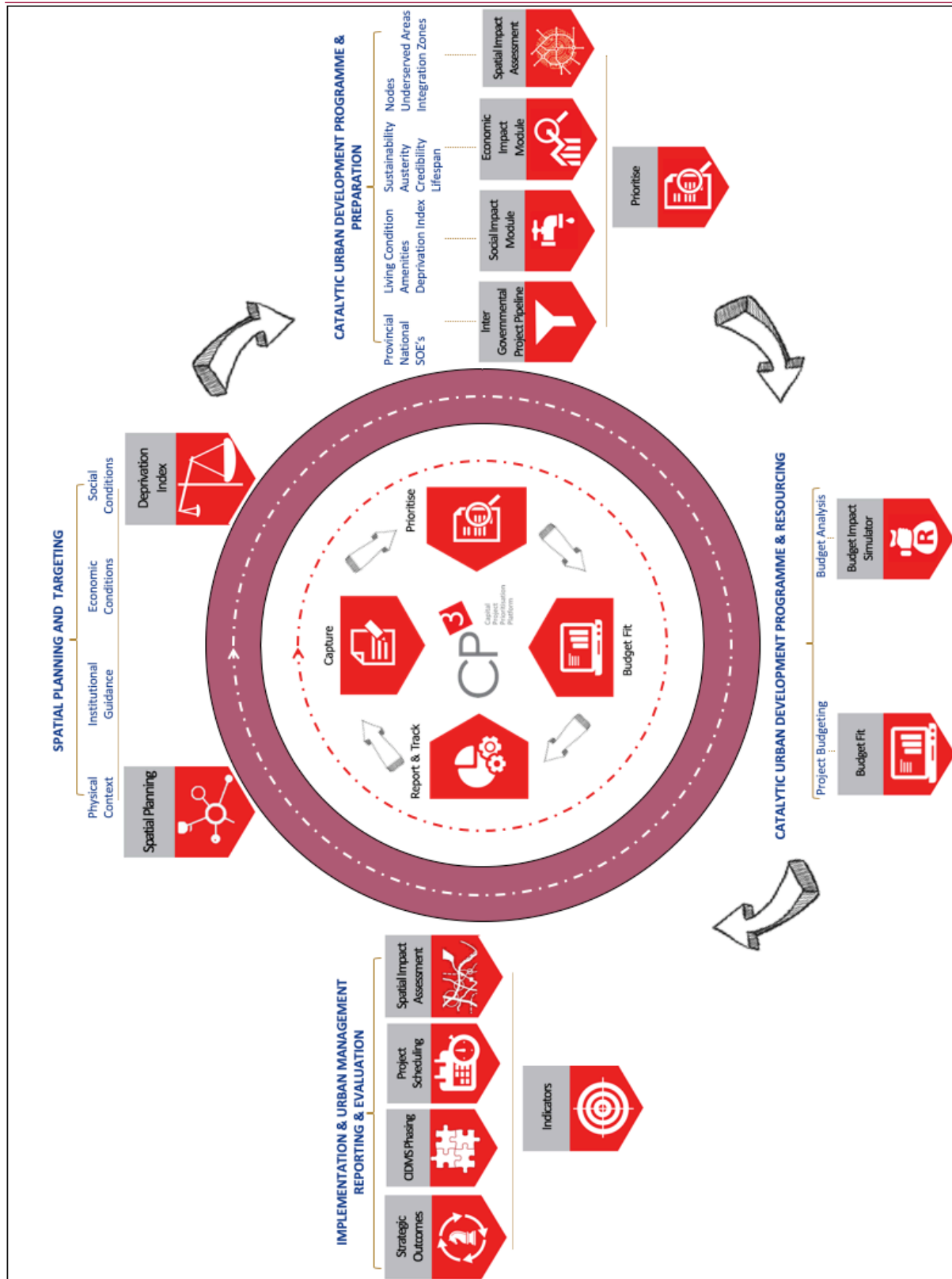


Figure 3: Institutional Arrangement

The integrated planning and budgeting CP3 process enables the municipality to amongst other:

- Capture all capital demand or capital needs emanating from municipal departments on one spatially enabled platform;
- Evaluate projects at the hand of various criteria – either quantitative, qualitative or spatial – based on data inputs from municipal departments;
- Evaluate capex against various spheres of governments’ strategic outcomes – as per the various policy documents of the municipality;
- Interact with other public realm entities in a collaborative manner – through means of the inter-governmental planning platform;
- Prioritise projects based on a sophisticated spatially-enabled prioritisation model – through means of a multi-criteria model;
- Run a budget analysis in order to test various capex scenarios - based on standardised indicators and inputs from the long-term financial model affordability envelope;
- Facilitate a budget scenario process together with the finance department of the municipality in order to determine the optimal MTREF capex budget for the municipality – annually; and
- Evaluate and report on a myriad of elements related to the capital investment book at any point in time based on the regulatory and institutional requirements emanating from the MFMA and National Treasury, i.e. SIPDM project phasing, mSCOA segments, MBRR schedule reports etc.

1.6.2 Draft IUDG CEF Guidelines

According the guidelines for the preparation of a CEF prepared by COGTA, a CEF should comprise of the following components:

- Step 1: Identify Functional Areas (FA) and Priority Development Areas (PDAs);
- Step 2: Undertake developmental and socio-economic profiling for the municipality as a whole, as well as each functional area;
- Step 3: Compile a land budget for residential and commercial growth for the next ten years;
- Step 4: Confirm the appropriateness of the SDF vision and long-term spatial structure for the municipality as a input to the prioritisation and budget alignment of the municipality;
- Step 5: Prepare programmatic and project-based responses per sector based on the land budget and residential and commercial growth estimates, in order to identify capital investment requirements and backlogs;
- Step 6: Develop a long-term financial plan, with a planning horizon of 10-years;
- Step 7: Compile an affordability envelope and optimal capital funding mix;
- Step 8: Structure capital investment programmes per functional area;

- Step 9: Compile a CEF for a 10-year horizon based on spatially-prioritisation; and
- Step 10: Conceptualise a 3-year (MTREF) CEIP with project and programmes which will serve as the municipal capital budget.

1.6.3 Stellenbosch Strategic Planning and Implementation Framework Process

The figure below depicts the process followed to facilitate the development the Capital Expenditure Framework.

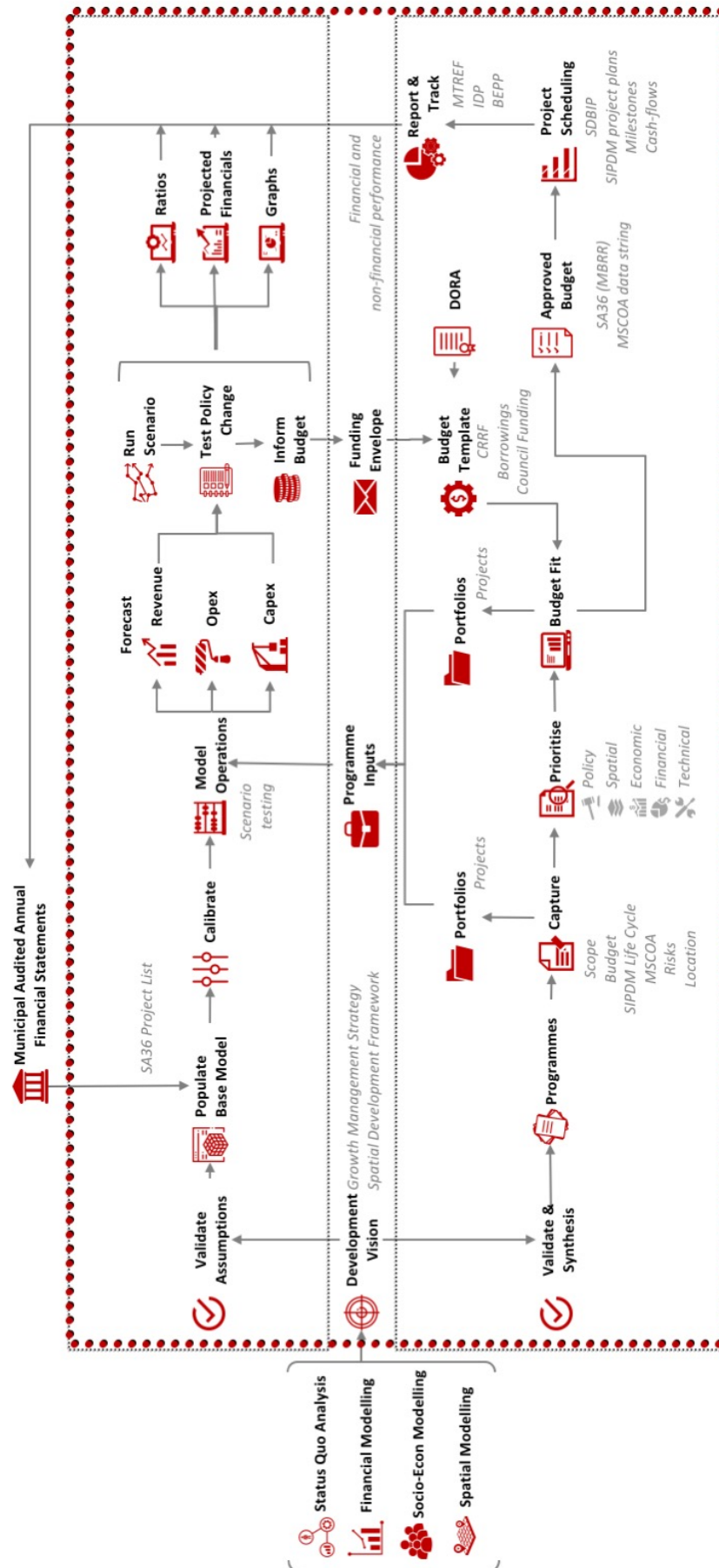


Figure 4: Compilation of the CEF based on CP3 and LTFS

This process depicted Figure 4 can be broken down into 11 distinct steps.

1.6.3.1 Step 1: Identify Functional Areas and Priority Development Areas

In order to define the context in which the CEF is applicable, this section aims to analyse the current spatial and demographic realities of the municipality, and conclude by identifying the functional areas² and Priority Development Areas from the SDF as the primary spatial structuring elements of the municipality.

This step is essential for the rest of the process, as it identifies the areas with sustainable development potential and areas which qualify as spatial targeting areas during the prioritisation process. Different Functional Areas / Priority Development Areas within the municipality, are fulfilling different functions, and should therefore not enjoy the same priority – a hierarchy of these areas should therefore be identified as to inform investment scenarios and decisions going forward.

1.6.3.2 Step 2: Complete socio-economic and spatial profiling

The purpose of this step is to understand the nature of the demographic and socio-economic characteristics of the municipality as a whole, and in each of the identified functional areas of the municipality. This assessment includes the current accessibility to, and quality of basic services as well as social facilities and amenities. This information serves as the base-data to be used for infrastructure and financial modelling.

1.6.3.3 Step 3: Compile a land budget and demand quantification

Once the socio-economic and spatial profiling has been concluded, growth scenarios are considered for the municipality in order to prepare a future land use budget including residential and commercial growth projections along with population projections over a 10-year period. These growth projections will serve as modelling input to derive demand for infrastructure and services in the municipality. Three components contribute to the demand for investment and can be summarised as follows:

- Existing households without access to services;
- Renewal and maintenance of existing infrastructure, and;
- The growth in households.

1.6.3.4 Step 4: Verify the SDF

The purpose of this step is to verify whether the municipal growth projections, in terms of the population, social facilities, basic services and land budget, is in line with the municipality's latest approved version of the SDF.

1.6.3.5 Step 5: Identify infrastructure demand and Capital Investment Framework

The purpose of this step is to identify specific infrastructure and service backlogs and requirements within the municipality's jurisdictional area. It will incorporate existing backlogs and include backlogs with regards to access-to-services requirements, assets refurbishment requirements and lastly, replacement and renewal requirements for a 10-year horizon. At the end of this step, a

² Please note, that the term "Functional Area" is defined by COGTA – but in essence refers to the core spatial structuring elements of the municipality.

comprehensive list of interventions will be identified that is required to realise the spatial vision of the municipality.

Considering firstly the institutional context in which municipalities find themselves and secondly the fact that other tiers of government are responsible for different investment mandates in the same jurisdiction, the CIF should not only consider capital investment from the local municipality, but also investment planning by provincial and national government. The purpose of the inter-governmental project pipeline is to enable a view of planned interventions by various spheres of government, within the same jurisdictional area, given that not all required infrastructure is the responsibility of the local government authority.

1.6.3.6 Step 6: Develop a long-term financial model and plan

The purpose of this step is to apply a sound long-term financial planning methodology which comprises of a four-step modelling process. This iterative process consists of the following key steps:

- Populate the financial planning base model;
- Calibrate financial planning base model;
- Forecast financial municipal financial position and ratios, and;
- Scenario Testing.

Once the long-term financial planning methodology has been applied, different scenarios can be tested, and the outcome results in a municipal affordability envelope and optimal capital investment funding mix.

1.6.3.7 Step 7: Identify an affordability envelope

Based on the LTFM, an affordability-envelope is compiled. The aim of the affordability envelope is to set the financial parameters for the CEF to prepare a 10 year horizon capital investment scenario.

1.6.3.8 Step 8: Project prioritisation and budget scenario development

The purpose of this step is to prioritise the list of capital demand or needs to realise the SDF developmental vision and population growth scenario. Once the project needs have been prioritised, by using a sophisticated model that enables spatial and alpha numeric data inputs, the projects are fitted to the affordability envelope. The spatial prioritisation is of specific importance as it facilitates the allocation of budget towards the spatially targeted Functional Areas and Priority Development Areas of the municipality as required by legislation referred to in Section 1.1 of this document. The purpose of this step is to effectively and efficiently allocate limited resources to an unlimited demand which will enable the city to sustainably allocate resources and priority to projects that will realise the strategic and spatial vision of the municipality.

1.6.3.9 Step 9: Compile programmes per Functional Area

The purpose of this step is to allocate the identified projects to functional implementation programmes. This aims to enable and ease sequential implementation within the Functional Areas.

1.6.3.10 Step 10: Capital Expenditure Implementation Framework

Once the spatial and financial framework have been developed, the next step entails the identification of an medium-term implementation framework. The CEF is compiled to provide the most sustainable development path and implementation of the CEF is guided by the MTREF, which is the capital expenditure implementing mechanism of the municipality.

1.6.3.11 Step 11: Implementation tracking

The purpose of this step is to provide insight on the implementation of the MTREF. This is done by ensuring the project pipeline (from conceptualisation to prioritisation and budgeting), is compliant³ with the requirements of National Treasury and that the SDBIP project schedule, cashflows and milestones are captured after budget approval, to facilitate financial and non-financial performance reporting within the implementation year(s).

³Complies with the requirements of mSCOA and SIPDM

Section 2 Functional Area Identification



2 Functional and Priority Development Area Identification

2.1 Contextualisation

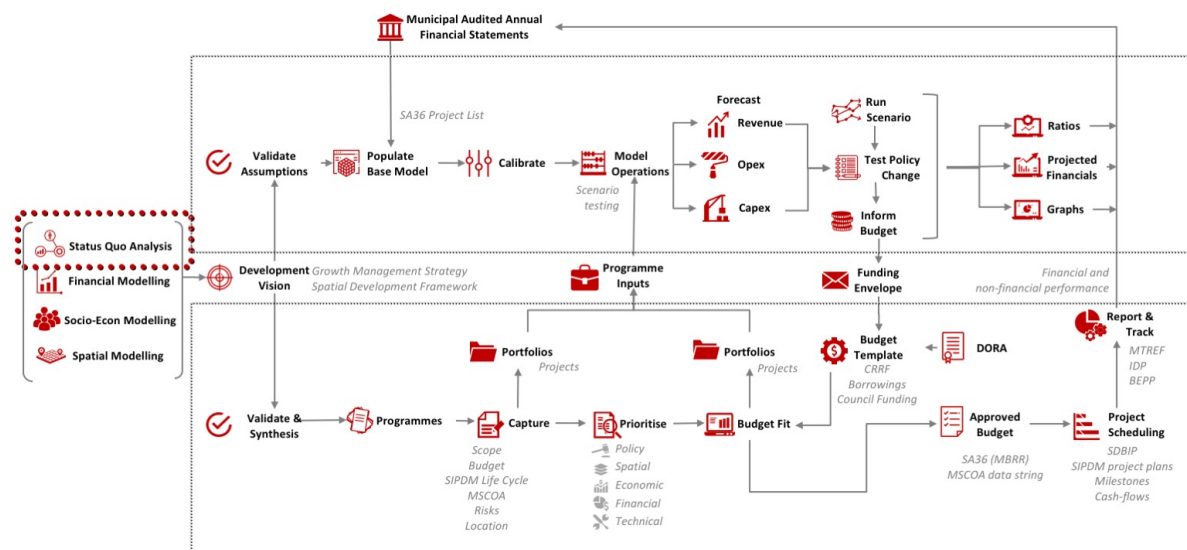


Figure 5: Spatial status quo analysis

In terms of section 152 (1) (b), (c) and (d) of the constitution, a municipality must ensure the provision of services to communities in a sustainable manner, promote social and economic development and promote safe and healthy environments. It continues and state in 152 (2) that a municipality must strive, within its financial and administrative capacity, to achieve the objectives set out in 152 (1). The current developmental pressures experienced within the South African context, specifically the lack of available resources to address the infrastructure demand faced by municipalities, together with the legislative framework as set out in the constitution of South Africa and other planning documents led to the implementation of the principle of spatial targeting. Spatial targeting simply refers to the deliberate focus of particular actions on a particular spatial area. This concept is currently very popular in the planning and urban management environment as it is a very effective and efficient principle to apply when dealing with limited resources and when a municipality aims to address spatial injustices in a focussed and integrated manner.

The purpose of this step is thus to contextualise the Functional Areas as well as the Priority Development Areas in the light of the municipalities jurisdictional area, future spatial structuring elements – as per the draft SDF, and current spatial structuring elements – such as the Urban Edge.

This section will firstly describe the concept of a Functional Area – as defined by COGTA. It will then continue to describe functional areas in terms of Stellenbosch and how it relates to the Spatial Development Framework, and the application thereof. The last component of this section will define the Priority Development areas, and express them in terms of Stellenbosch.

2.2 Status of the Spatial Development Framework

A vital component of the Capital Expenditure Framework, as envisioned by the Capital Expenditure Framework Guidelines (2018) developed by the National Department of Cooperative Governance and Traditional Affairs, is the relationship between the Spatial Development Framework and the Capital Expenditure Framework. It must be noted that even though the Spatial Development Framework is in draft format, its conceptual structure and investment paradigm guided the Capital Expenditure Framework. In order to mitigate any possible risk in this regard, the Capital Expenditure Framework team has had numerous engagements with the Spatial Development Framework team in order to

ensure that the investment paradigm and prioritisation models are effectively directed towards the development concept of the draft Spatial Development Framework.

2.3 Spatial Structuring Elements as per the CEF Guidelines

The following figure depicts the relationship between specific spatial structuring elements and Stellenbosch's planning paradigm. It is important to note that each Spatial Development Framework across all municipalities has a different view on what the concepts of different spatial structuring elements entail. It is for that purpose that the CEF will relate the "wall-to-wall" Stellenbosch SDF in terms of the CEF Guidelines⁴.

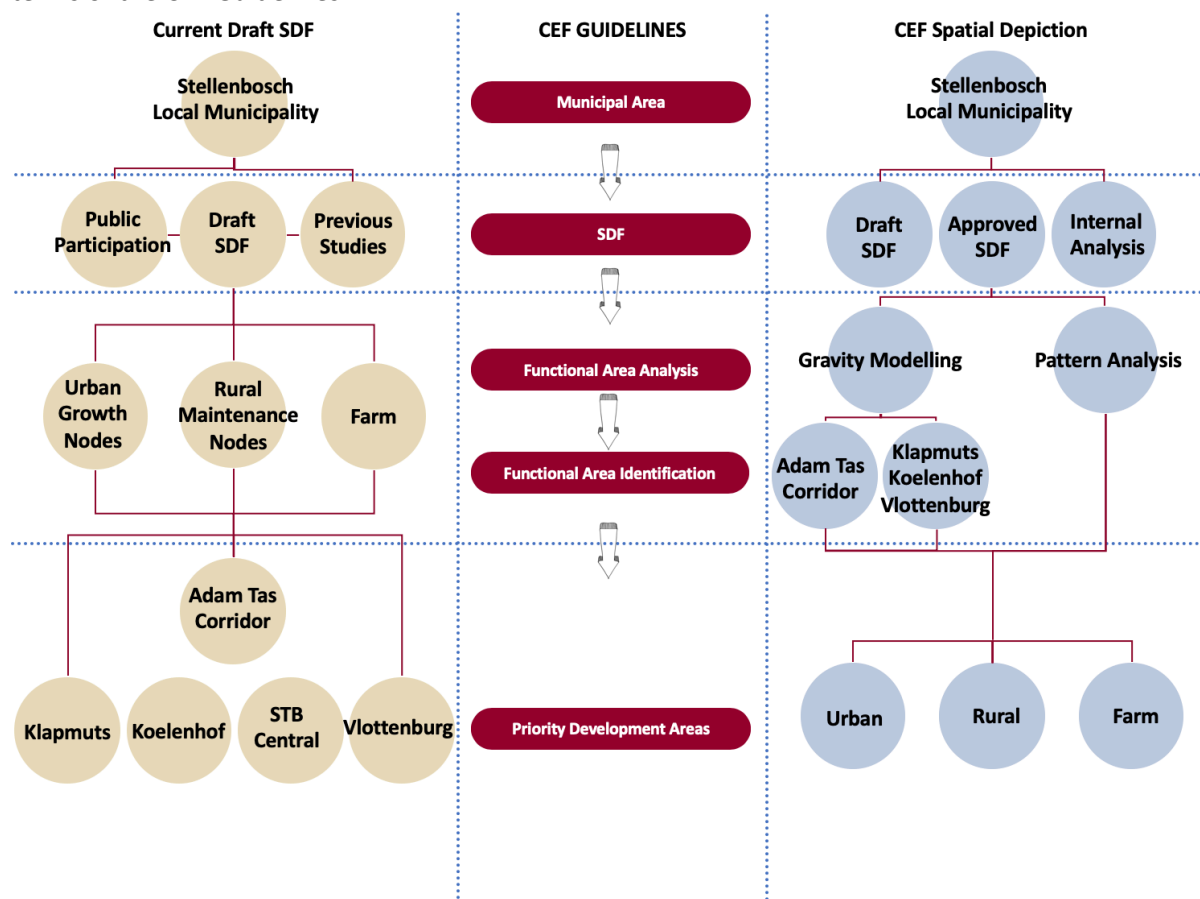


Figure 6: Spatial Structuring as per the CEF Guidelines

The following subsections will describe the figure above. However, it is worth noting at this point that the CEF Spatial Depiction show that a wall to wall approach was taken in order to enable various modelling outcomes based on the total Stellenbosch population and in so doing, enabling the municipality to have a full understanding of its customer base.

2.4 Understanding the concept of Function Areas

According to the CEF Guidelines a functional area is an area with similar characteristics (homogenic) from a developmental and service demand perspective. A typical example is to demarcate the rural part of the municipality or the tribal land as a functional area because it has more or less similar

⁴ A similar approach of standardization can be found in the Built Environment Performance Plans (BEPP) Guidelines in terms of the Urban Network Concept via the National Treasury City Support Program

challenges (low density, lack of high order services, etc.) and it requires a specific development strategy that is unique to the development challenges of the area.

The ability to sustain any function or service is based on a demand threshold. The threshold population, for example, to sustain a small café is completely different from the threshold population to sustain a hospital. Matters such as the income of the threshold population, their mobility and many other factors complicate matters. The crucial issue is, nevertheless, that functional boundaries vary and do not coincide with municipal boundaries. Municipal boundaries describe administrative jurisdiction, but for obvious reasons, the municipality cannot plan for areas outside their jurisdiction. In the same way that development efforts are focused on selected nodal areas the demand for services and uses are determined and generated by the broader functional area that a node serves rather than the extent of develop within the node only. To accommodate this dynamic it was necessary to make a distinction between different functional areas in the municipal area.

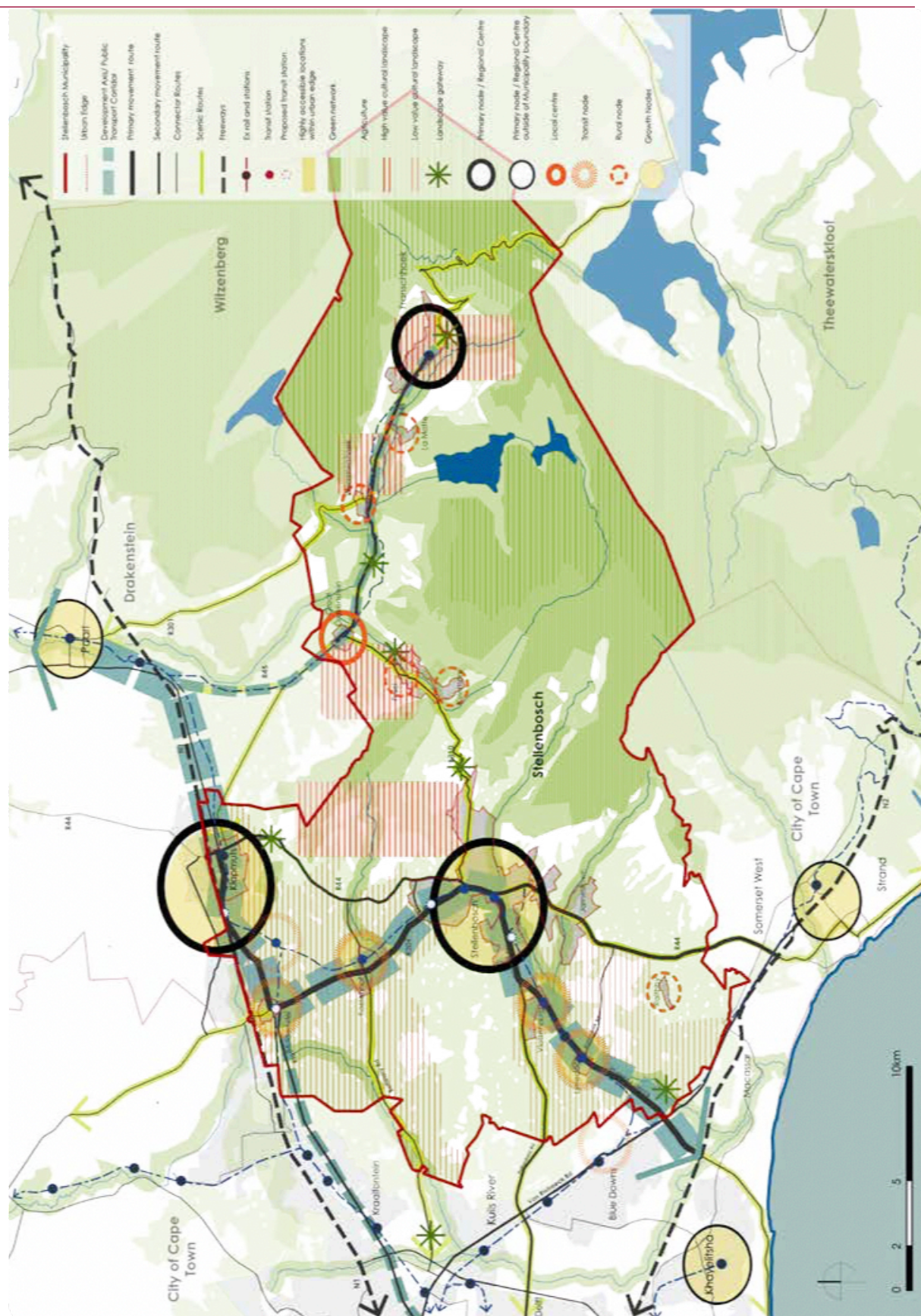
2.5 Spatial Development Framework and Functional Areas

To translate the Stellenbosch Spatial Development Framework in the context the functional areas as per the CEF guidelines; the point of departure was to consult the future development vision of Stellenbosch⁵. The main functional areas have been identified as:

- Stellenbosch;
- Klapmuts;
- Koelenhof;
- Vlottenburg; and
- Franschhoek.

According to the development vision of the municipality, Franschhoek should enjoy a development approach based on maintenance expenditure. In tandem with the said approach, the remaining functional areas should be viewed in the light of urban restructuring, integration and densification with the aim to restructure Stellenbosch along the Adam Tas corridor (from Klapmuts to Vlottenburg).

⁵ Refer to the Stellenbosch Spatial Development Framework review



Map 1: Vision of Stellenbosch Local Municipality (As per Draft SDF Review)

These areas are narrowly demarcated and also substantially different in terms of current development. It is however not currently effective to determine future target populations for these areas for two reasons:

- Firstly, the development concept is still in process, and will only be clear once the detailed development plan has been established as part of the Spatial Development Framework; and
- Secondly, if you base future population on past population trends, the result will be underwhelming - especially in areas with no current population - and will not lead to a logical and defensible population size.

Furthermore, the fact that areas such as Vlootenburg are not developed makes long-term demand estimates for land uses and infrastructure that much more challenging without a clear spatial vision.

2.6 Defining Priority Development Areas

According to the CEF Guidelines "Priority Development Areas" as the name suggests, are areas where the municipality intends to focus investment in order to achieve the goals of the SDF and other strategic documents.

In order to define the Priority Development Areas, the following two regimes were considered:

- Gravity Modelling; and
- Current Settlement Pattern.

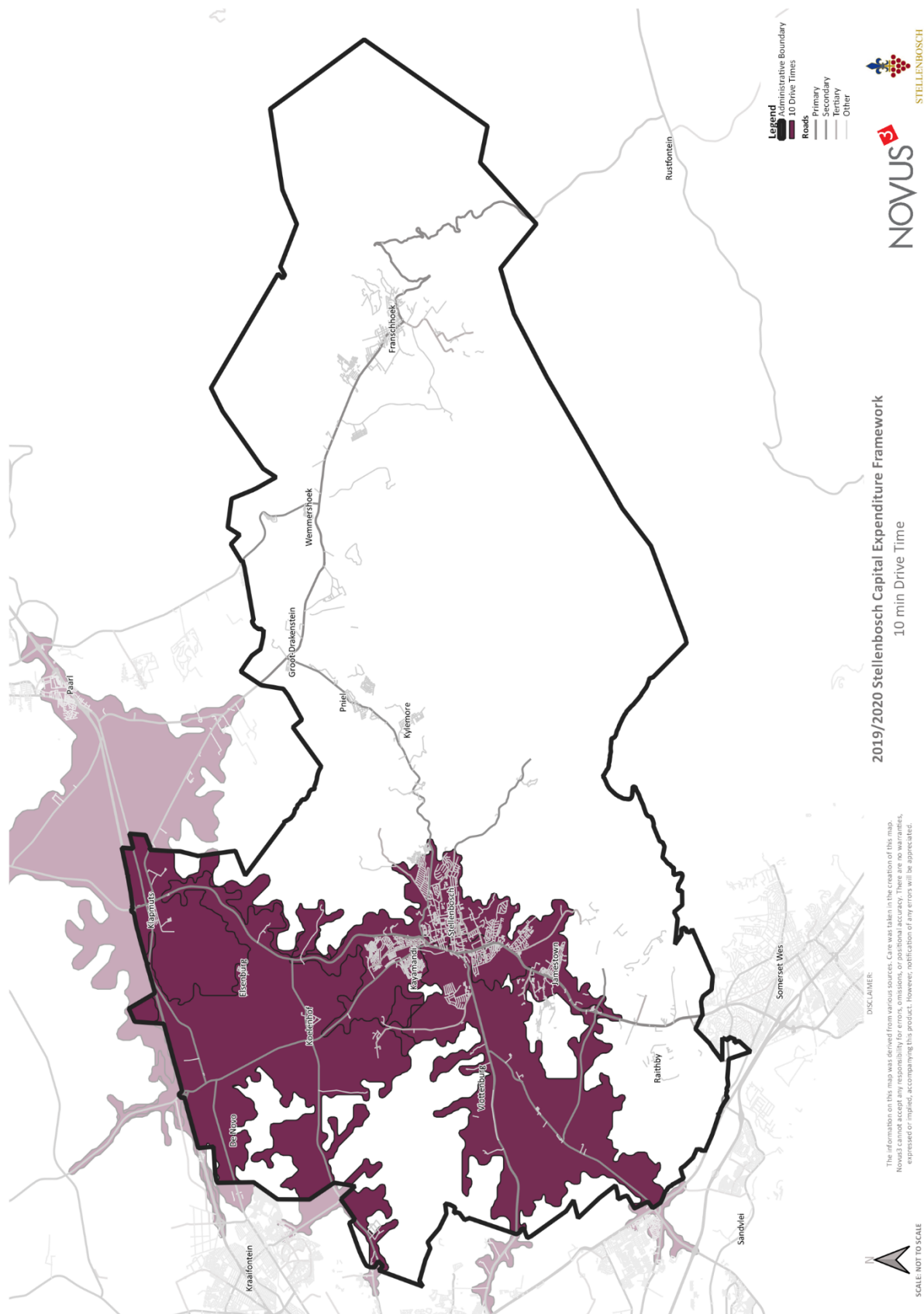
2.6.1 Gravity Modelling

The concept of a gravity model originates in transportation modelling and is a form of a trip distribution model. A distribution model produces a new origin-destination trip matrix to reflect new trips in the future made by population, employment and other demographic changes so as to reflect changes in people's choice of destination.

The gravity model gets its name from the idea of gravity where the 'pull' between two objects is proportional to the size of the object and inversely proportional to (some function of) the distance between them. This is similar to travel between areas where the amount of travel between two areas can be considered as being proportional to their population, numbers of jobs, schools, factories, offices etc. but inversely proportional to the distance (or some measure of the separation or deterrence) between them. When researchers started looking at this they found that generally this relationship holds up quite well - the bigger the towns the more travel there was between them and the further apart towns were, the less travel there was between them. The amount of pull between the origin zone and the destination zone is given as the origin and destination trip ends respectively.

It is the same logic that validated the investigation of Priority Development Areas as a function of 10 minute drive times with respect to the functional areas identified. The assumption was that the more connected a functional area is, the more people it will attract, reflecting a natural area of function, and so defining the area which the municipality should prioritise capital investment.

The map below depicts the 10 minute drivetime based on the functional area nodes:



Map 2: 10-minute travel time isochrones based on functional area nodes

Four issues are evident from the drive times:

- Firstly, even on a low threshold, there are substantial overlaps in the areas that the isochrones covered. This might point to the fact that should development occurs, the functional integration between the areas is possible but also that these areas are so close together that they will, from a business point of view compete with one another.
- Secondly, the areas reach over municipal boundaries. This especially true in the case of Klappmuts which implies that it competes with the adjacent areas in Drakenstein and also that development in Drakenstein will have a direct impact on the development of Klappmuts. It might be advisable for the municipality to consider absorbing the entire area, as Klappmuts serves and is likely to develop as a single functional area. This will contribute to developmental cohesion.
- Thirdly, the accessibility and the impact of major routes is evident. It implies that the long-term development of the road network will have major impacts on the success or failure of the identified areas.
- Lastly, and very importantly the isochrones do not cover the eastern parts of the municipal area. However, irrespective of the Municipality's priorities, the customers in the municipal area will legally demand services and will continue to impact on demand for services and infrastructure.

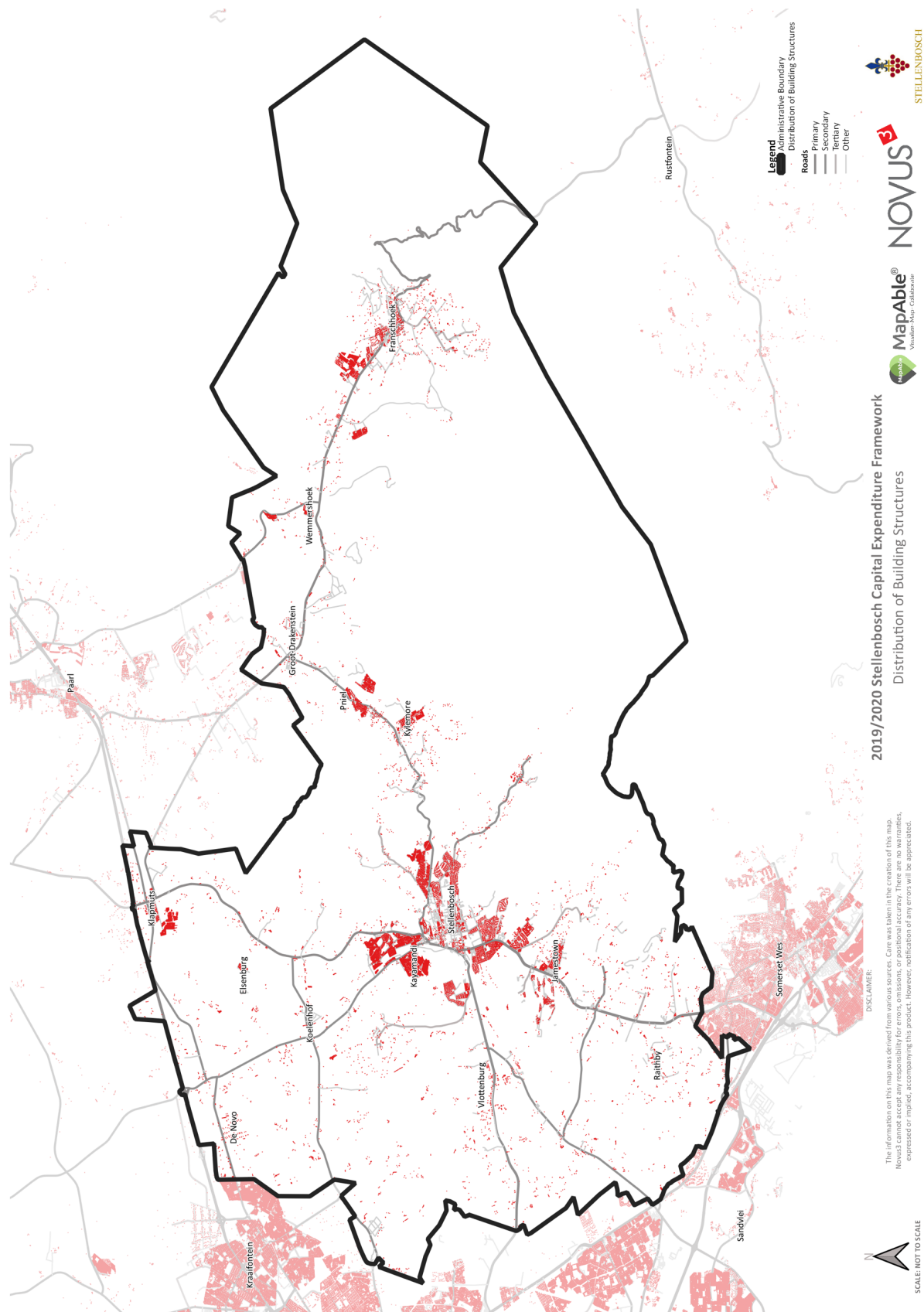
2.6.2 Current Settlement Patterns

Current settlement patterns provides a good understanding of the status quo and informs modelling exercises. Current settlement patterns serves as one of various informant to the Priority Development Areas.

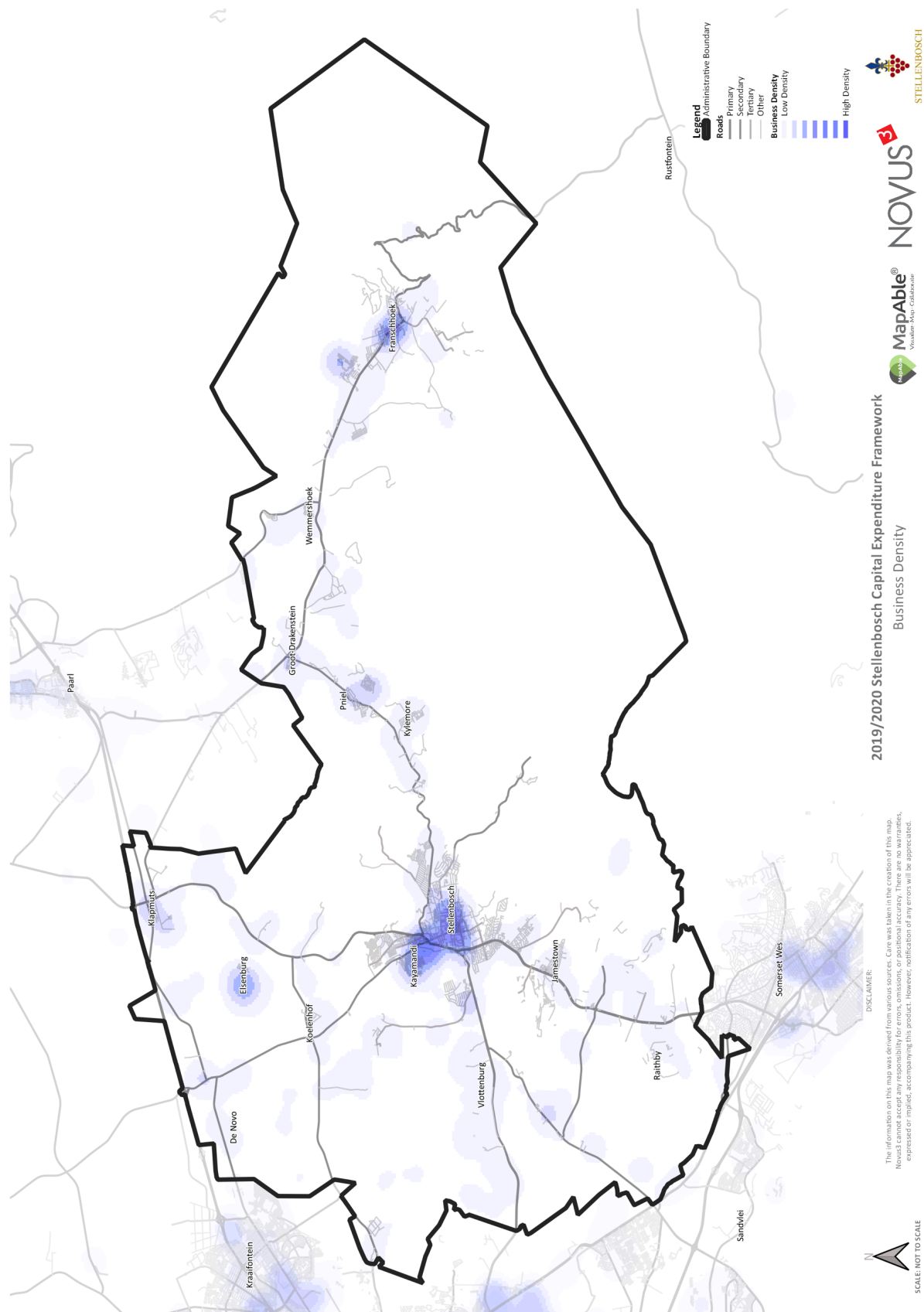
The following Maps illustrates the difference in development Intensities within the municipality⁶⁷:

⁶ MapAble database www.mapable.co.za

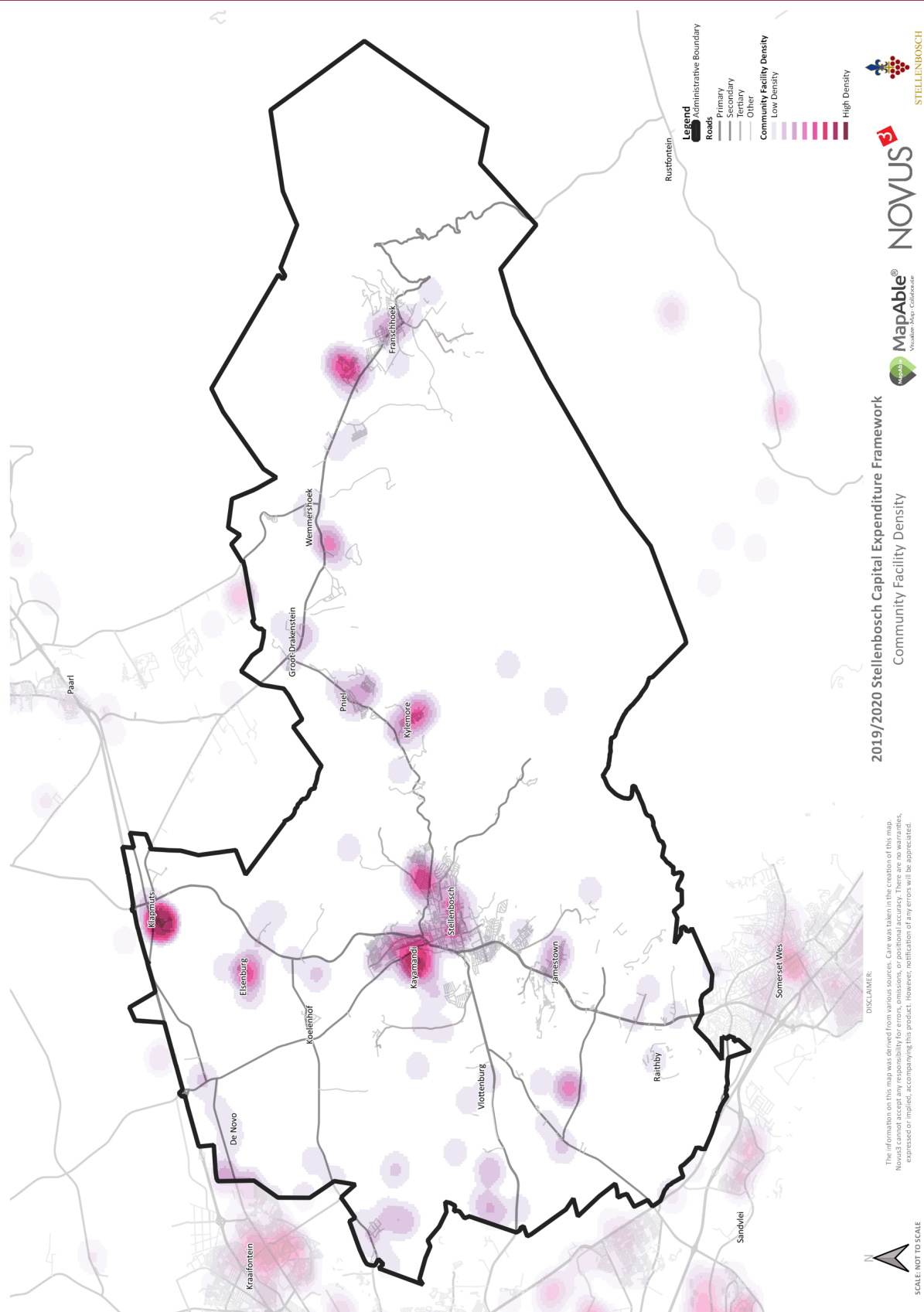
⁷ Please click on the maps to open them on your browser; powered by MapAble



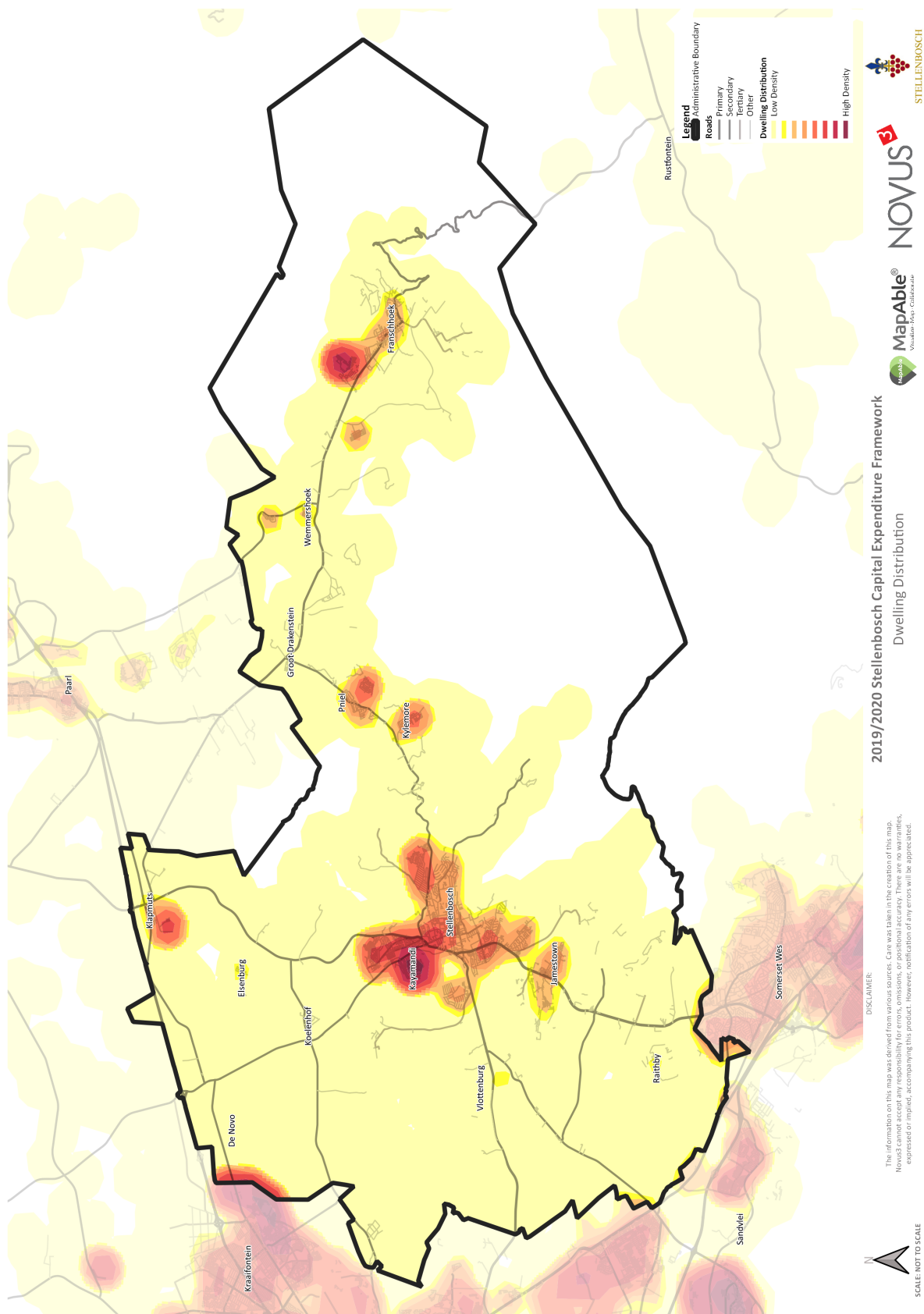
Map 3: Distribution of building Structures



Map 4: Business Densities



Map 5: Community Facilities densities



Map 6: Dwelling Distribution

The importance of secondary rural nodes is evident and do contribute to long-term demand. For the purposes of forecasting long-term land use, services and infrastructure demand, it is evident that not only the functional areas should be considered but the whole municipality.

2.6.3 The Adam Tas Corridor

The most strategically located land in Stellenbosch town comprises large industrial spaces, including land previously occupied by Cape Sawmills and Distell facilities. A significant proportion of these have been vacated or will be vacated in the foreseeable future in response to changes in the operating context of manufacturing enterprises. Thoughtful redevelopment of these spaces – at scale – can contribute meaningfully to meeting existing challenges and MSDF objectives. In simple terms, the concept is to launch the restructuring of Stellenbosch town through redevelopment of the Adam Tas Corridor, the area stretching along the R310 and R44 along the foot of Papegaaiberg from the disused Cape Sawmills site in the west to Kayamandi and Cloeteville in the north.

It forms the western edge to the town but is not well integrated with the rest of Stellenbosch, largely because of the barrier/ severance effect of the R44 and the railway line. Much of the area has a manufacturing use history. It includes the disused sawmill site, the government owned Droë Dyke area, Distell's Adam Tas facility, Oude Libertas, various Remgro property assets, Bosman's Crossing, the rail station, Bergkelder complex, Van der Stel sports complex, the George Blake Road area, and parts of Kayamandi and Cloeteville. Underutilised and disused land in the area measures more than 150ha.

Redevelopment in terms of the concept offers the opportunity to:

- Grow Stellenbosch town – and accommodate existing demand – in a manner which prevents sprawl, and create conditions for efficient, creative living and working.
- Stimulate and act as a catalyst for the development of improved public transport and NMT
- Rethink and reconstruct infrastructure, and particularly the movement system, including the possible partial grade separation of east- west and north-south movement systems, in turn, integrating the east and west of town and releasing land for development.
- Integrate Kayamandi and Stellenbosch town seamlessly.
- Shift new development focus to the west of town, with Die Braak and Rhenish complex forming the center and seam between the new west and east of Stellenbosch town.
- Accommodate the parking of vehicles on the edge of town whilst the corridor provides for and promotes a greater focus on pedestrianism and cycling into the core town.
- Accommodate uses which meet urgent needs, specifically higher density housing and university expansion, also assisting in establishing a compact, less sprawling town, public transport, and pedestrianism; and
- Increases land value east of the R44 and in the area between Kayamandi and the Bergkelder complex.

2.6.4 Conclusion

In its current planning, the municipality makes a distinction between urban and rural nodes, on the one hand, and the balance of the area. The balance of the land is predominantly farming land, but it also includes large tracts of undevelopable mountainous terrain.

For the purposes of the Capital Expenditure Framework, a distinction was made between the urban and rural nodes on the one hand and the balance of the areas on the other hand. This distinction is based on the assumption that urban related development and supporting social services will be focused within the nodal areas and the balance of the areas will be the mainstay of agricultural development. However, there are substantial numbers of people settled in the agricultural areas that will contribute to the demand for social and community services but not necessarily for housing and related infrastructure services. This assumption becomes the basis for modelling long-term growth and investment demand. This allows one to determine the demand for land and development in nodal areas based on the broader demand generated by the functional areas that these nodes serve.

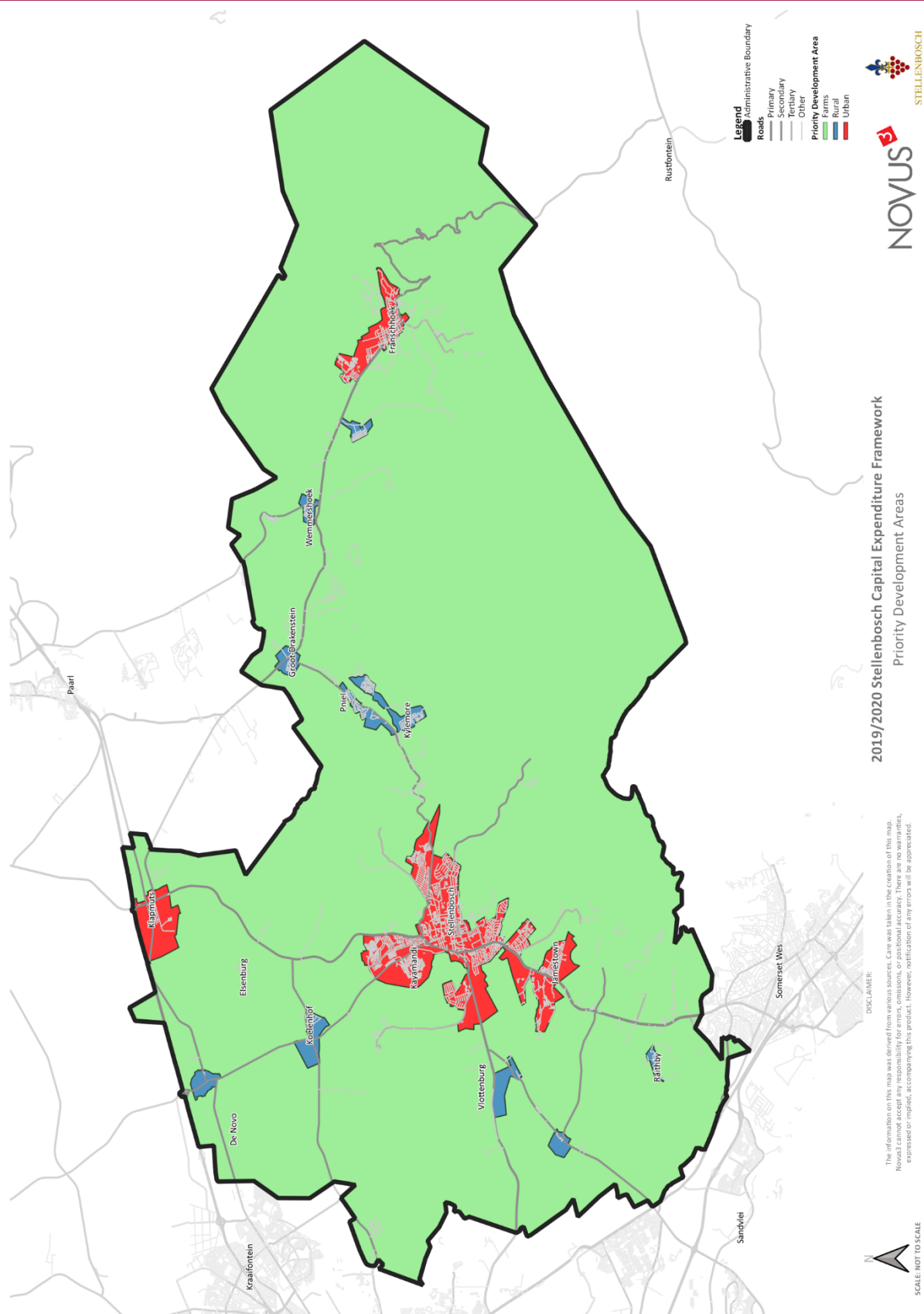
2.7 Unpacking the Priority Development Areas

When using the priority development areas as the basis for establishing future demand for services and infrastructure, the first step is to assess the long-term population trends. Although one works in a very interventionist environment, historical trends are the best indicators for future growth and change expectations. The next table shows a forecast for population growth expected in the municipal area.

Table 1: Population Distribution

Timeline	Urban	Rural	Farm	%
1996	52.19%	5.04%	42.8%	100.00%
2001	47.68%	5.89%	46.4%	100.00%
2006	49.09%	7.12%	43.8%	100.00%
2011	50.50%	8.35%	41.1%	100.00%
2016	49.77%	9.44%	40.8%	100.00%
2021	49.49%	10.56%	40.0%	100.00%
2026	49.20%	11.68%	39.1%	100.00%
2030	48.97%	12.58%	38.5%	100.00%

Based on historical trends and prevailing policies of growth restrictions in the urban nodes, it is clear that development pressures will focus on the rural nodes. This is to the extent that the urban nodes will decrease in terms of its population share in the municipal areas. It does not imply that the urban and farming populations will not grow. The expected growth rates are, however, lower than the forecasts for the rural nodes.



Map 7: Priority Development Areas

The following table is a summary of the Stellenbosch nodal points. For a detailed profile please refer to Annexure 1.

Table 2: Summary profile of the Priority Development Areas

	Type	Urban node	Rural Node	Farming	Total
	Area (ha)	3 803	1 099	79 977	84 879
Population	Population 1996	61 734	5 259	37 361	104 354
	Population 2001	68 810	7 013	43 153	118 976
	Population 2011	100 973	12 999	41 739	155 711
	Population/ha 1996	16.23	4.79	0.47	1.23
	Population/ha 2001	18.09	6.38	0.54	1.40
	Population/ha 2011	26.55	11.83	0.52	1.83
Households	Households 1996	15 973	1 091	9 091	26 155
	Households 2001	17 498	1 476	10 147	29 121
	Households 2011	30 495	3 040	9 793	43 328
	Households /ha 1996	4.20	0.99	0.11	0.31
	Households /ha 2001	4.60	1.34	0.13	0.34
	Households /ha 2011	8.02	2.77	0.12	0.51
	Households size 1996	3.86	4.82	4.11	3.99
	Households size 2001	3.93	4.75	4.25	4.09
	Households size 2011	3.31	4.28	4.26	3.59
Dwelling frame	DF18 Dwelling	32 186	3 692	7 014	42 892
	DF18 Businesses	591	46	268	905
	DF18 Special dwelling institutions	3 182	4	240	3 426
	DF18 Service units	126	17	66	209
	DF18 Recreational units	46	14	8	68
	DF18 Other Units	994	282	3 549	4 825
	DF18 Vacant	989	306	257	1 552
	DF18 Total units	38 114	4 361	11 402	53 877
Schools	Primary school	18	7	4	29
	Secondary school	10	0	1	11
	Intermediate school	0	0	1	1
	Combined schools	1	0	4	5
Facilities	Public health facilities	12	2	0	14
	Private health facilities	1	0	0	1
	SAPS stations	4	1	0	5
	Lower courts	1	0	1	2
Land cover 2014 (non-urban) (ha)	Cultivated commercial fields	99.37	22.78	3 870.32	3 992.47
	Cultivated commercial pivot	0.00	0.00	84.11	84.11
	Cultivated orchard and vines	297.58	132.72	19 005.52	19 435.82
	Sugarcane	0.00	0.00	0.00	0.00
	Subsistence farming	0.00	0.00	0.00	0.00
	Forests & Plantations	43.97	15.04	2 951.10	3 010.11
	Mining	0.00	17.06	44.57	61.63
Land cover 2014 (urban) (ha)	Urban built-up	19.47	0.26	17.90	37.63
	Urban commercial	306.12	1.27	42.34	349.73
	Urban industrial	145.06	20.80	265.89	431.75
	Urban residential	867.70	28.90	58.46	955.06

	Type	Urban node	Rural Node	Farming	Total
	Urban townships	218.11	160.80	102.22	481.13
	Urban informal	47.61	0.00	3.92	51.53
	Rural villages	0.00	0.00	0.00	0.00
	Urban sports and golf	276.67	3.47	112.28	392.42
	School and sports grounds	66.67	13.05	22.86	102.58
	Small holdings	69.40	12.84	337.36	419.60
	TOTAL	2 016.81	241.39	963.23	3 221.43
Roads (km)	National	0	0	22.96	22.96
	Arterial	15.2	9.93	93.59	118.72
	Secondary	0.43	1.44	35.48	37.35
	Tertiary	22.64	19.42	513.75	555.81
	Main (Urban)	28.46	1.15	24.72	54.33
	Streets (Urban)	196.74	0.36	32.53	229.63
	Total roads	263.47	32.3	723.03	1018.8

Section 3 Socio-Economic & Spatial Profiling



3 Socio-Economic & Spatial Profiling

3.1 Contextualisation

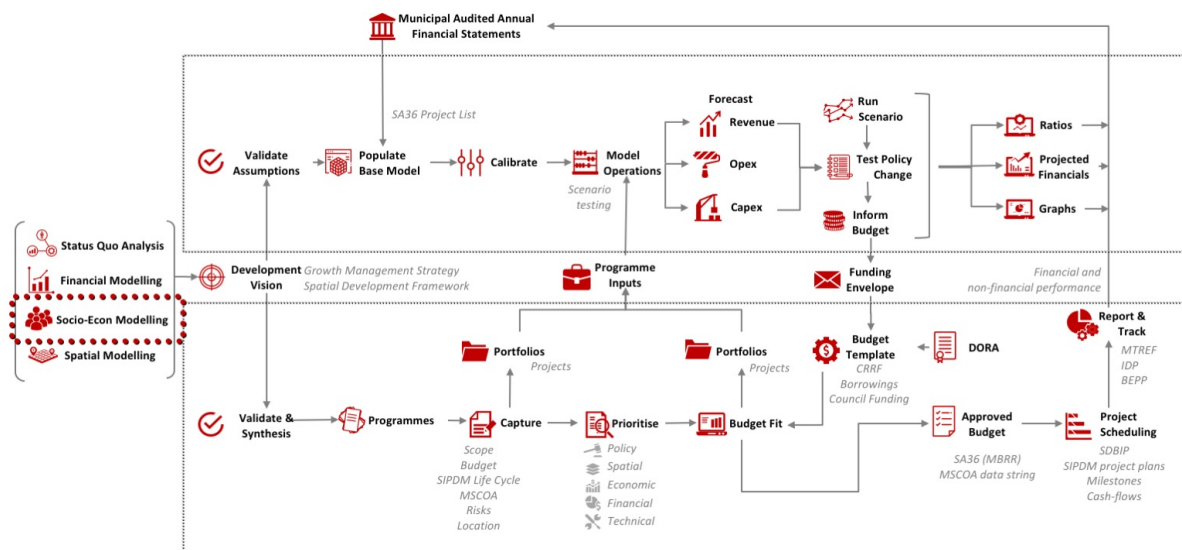


Figure 7: Socio Economic & Spatial Profiling

This section shows the demographic, socio-economic and spatial characteristics for the municipal area. The spatial and socio-economic profile of the municipality drives future demand and hence capital and operating investment and expenditure.

The aim of this analysis is to obtain an in-depth understanding of the demographic and socio-economic characteristics of the population that are being served in each FA of the municipality. This assessment typically includes the access to infrastructure and social services and amenities, as well as the level of service of these services and amenities. The purpose of the municipal profiling is therefore twofold:

- Firstly, to identify the population within the municipality and FAs in order to determine the base unit of needs estimation as input infrastructure modelling and financial modelling, and;
- Secondly, to understand the status quo of services within the municipality.

These two basic elements were used to quantify and to project growth in infrastructure provision demand over the planning horizon of 10-years. Understanding the socio-economic and spatial profile of the municipality enables the municipality to make more accurate and informed decisions regarding capital investment going forward.

Social profiling is usually presented in a municipality's SDF, however, given the lack of quantification in the existing SDFs across local governments nation-wide, municipal and FA profiling is deemed a necessary step by the CEF guidelines as a prerequisite to evidence-based planning. This section therefore only presents the municipal profile for purposes of planning contextualisation.

3.2 General Context: Background

3.2.1 Demarcation History

South Africa undergoes a major reassessment of its municipal demarcations prior to each municipal election. Changes in municipal and ward boundaries affect all levels of planning and also long-term development strategies. The next table shows the municipality's and wards which previously formed part of the current area under assessment.

Table 3: Stellenbosch Local Municipality's demarcations history

	2016	2011	2006	2001	1996
District municipality(s) / Metropolitan area(s) affected	Cape Winelands	Cape Winelands	Cape Winelands DC	Boland DM, City of Cape Town MM	Metropolitan Area Overberg DC Winelands DC
The local municipality(s) affected:	Stellenbosch	Stellenbosch	Stellenbosch	City of Cape Town Stellenbosch	Franschhoek TLC Helderberg MLC Nuweberg TRC Oostenberg MLC Paarl TRC Pniel TLC Stellenbosch TLC Stellenbosch TRC
Municipal ward(s) affected	WC024-1 WC024-2 WC024-3 WC024-4 WC024-5 WC024-6 WC024-7 WC024-8 WC024-9 WC024-10 WC024-11 WC024-12 WC024-13 WC024-14 WC024-15 WC024-16 WC024-17 WC024-18 WC024-19 WC024-20 WC024-21 WC024-22	WC024-1 WC024-2 WC024-3 WC024-4 WC024-5 WC024-6 WC024-7 WC024-8 WC024-9 WC024-10 WC024-11 WC024-12 WC024-13 WC024-14 WC024-15 WC024-16 WC024-17 WC024-18 WC024-19 WC024-20 WC024-21 WC024-22	WC024-1 WC024-2 WC024-3 WC024-4 WC024-5 WC024-6 WC024-7 WC024-8 WC024-9 WC024-10 WC024-11 WC024-12 WC024-13 WC024-14 WC024-15 WC024-16 WC024-17 WC024-18 WC024-19	Cape Town-13 Cape Town-15 Cape Town-84 Cape Town-85 WC024-1 WC024-2 WC024-3 WC024-4 WC024-5 WC024-6 WC024-7 WC024-8 WC024-9 WC024-10 WC024-11 WC024-12 WC024-13 WC024-14 WC024-15 WC024-16 WC024-17 WC024-18	No data

The data shows that Stellenbosch had little demarcation disruptions. This contributes to stability in the municipal administrative area and allows more certainty in planning investment and operations.

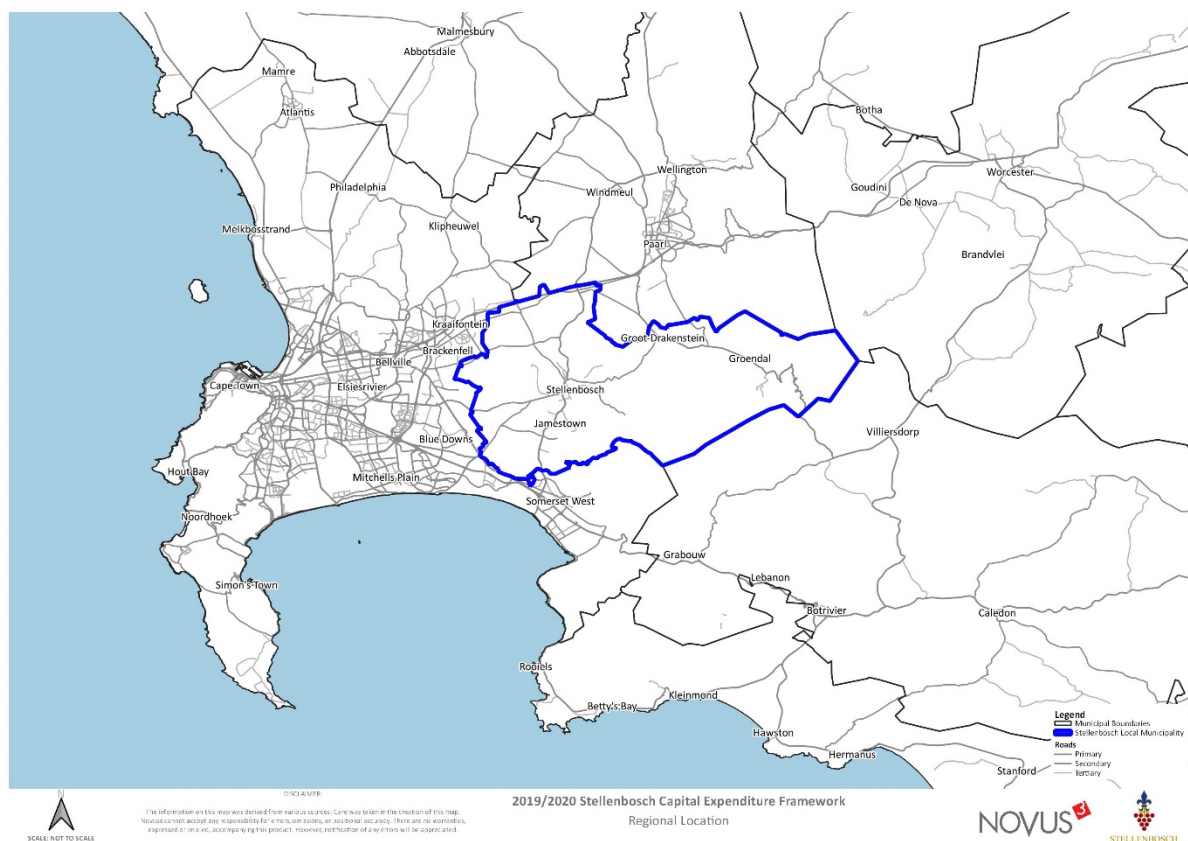
3.2.2 Spatial Relationship

Stellenbosch's location has a clear impact on its development. Its distance from the metropolitan core allows it to develop an own identity and carve its own strategies, but it will always be linked to the development of the greater Cape Town area.

Simply, in terms of distance relations, development will always tend to gravitate towards the metropolitan core rather than away from it. This implies that the western parts of the municipality

will always have more development pressure than the eastern parts. However, its interface with the high levels of settlement in the adjacent parts of the metropolitan area will benefit Stellenbosch or alleviate pressure if the Metropolitan Government pursues densification strategies under the banner of building a compact city. It might allow the Municipality to create a band of low-intensity development between its urban core and the adjacent settlement areas in the metropolitan area.

These spatial relationships are important. The subsequent profile, and especially the maps continue to emphasise the spatial distribution of the elements and their impact on Stellenbosch.



Map 8: Spatial Relationship of Stellenbosch

3.3 Macro Economic Context

3.3.1 Demography

3.3.1.1 Total Population

Total Population of Stellenbosch is the 2nd highest (with Breede Valley) in the District at approximately 173 000, growing at 2% p.a. (Provincial 2% p.a. and National 1.5% p.a.)

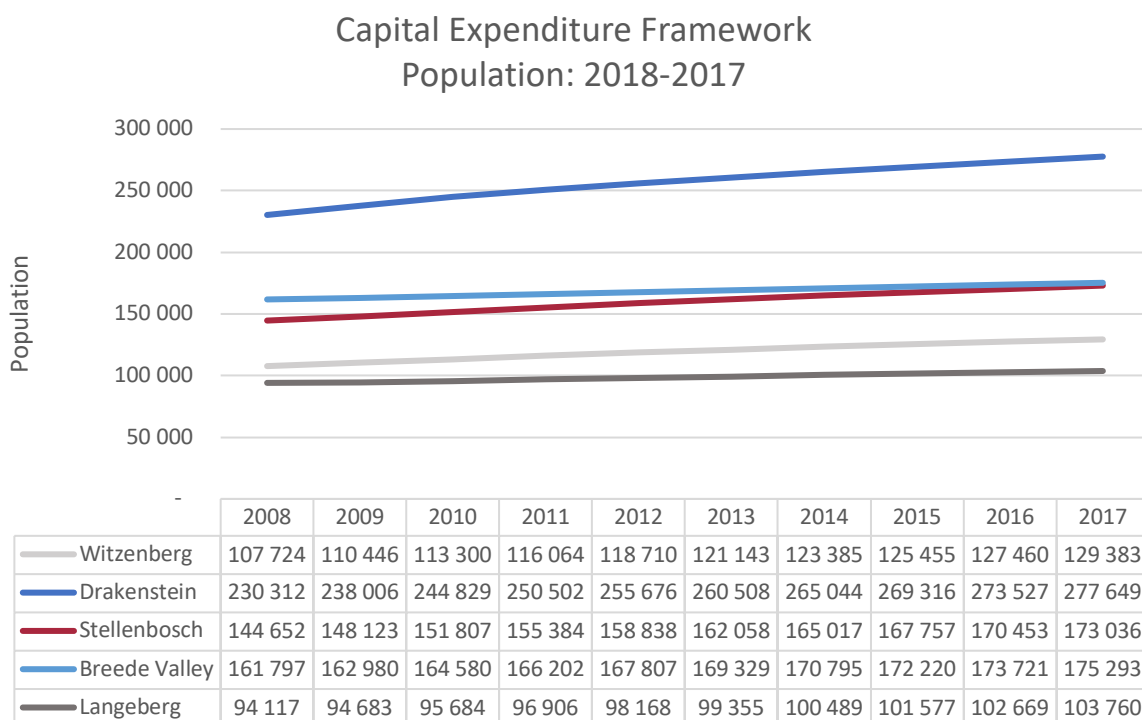


Figure 8: Population

3.3.1.2 Household Income Distribution

13.3% of households earn an annual economic income of below R30 000 p.a., and the highest concentration of households (9.8%) earn between R192 000 – 360 000 p.a.

The average household's income for Stellenbosch is R 209 700 p.a (R 17 475 p.m). which is the second highest of all five municipalities in Cape Winelands District, but higher than the national average of R 190 386 p.a.

The average annual per capita income of Stellenbosch of R 78 293 is the highest in the district, followed by Drakenstein: R 76 593; Breede Valley; R 67 789; Langeberg: R 62 675; and Witzenberg: R 55 955.

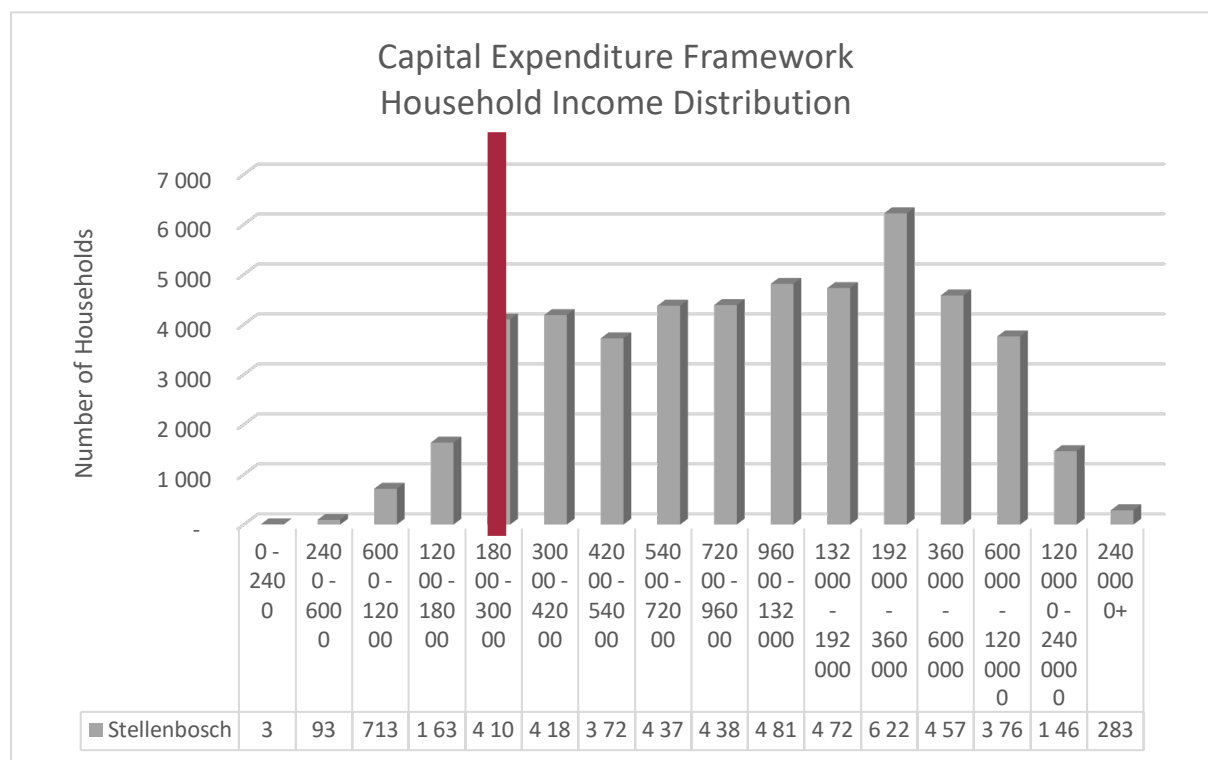


Figure 9: Distribution of Household Income

3.3.1.3 Population Age profile

Population Age Profile of Stellenbosch reflects a very young population with 52% under 29 years old and the single highest population is in the 20-24-year cohort. This is typical of a young developing society although in Stellenbosch's case, the profile is probably distorted by the number of students coming into the area.

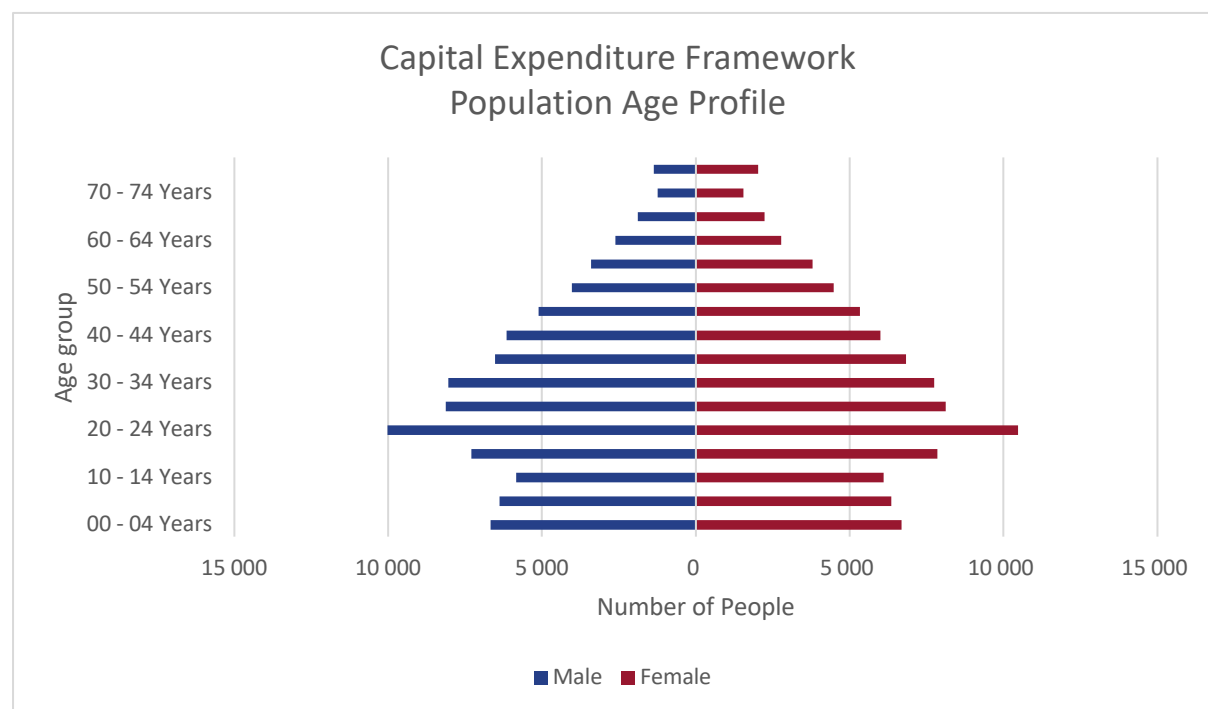


Figure 10: Age Profile

3.3.1.4 Unemployment Rate

The official Unemployment Rate of Stellenbosch of 16.8% is 9.6 percentage points lower than the national average of 26.4% but ranks second highest when compared to the other municipalities in the District. The rate has increased over the last 10 years.

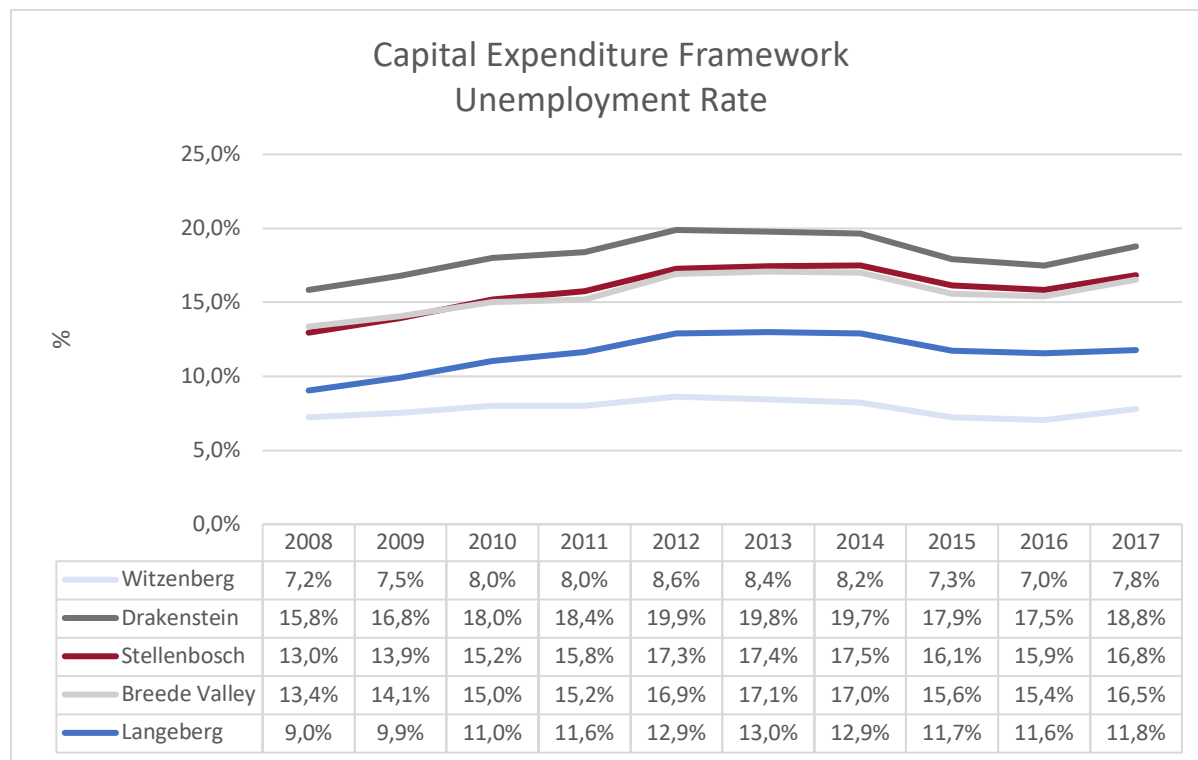


Figure 11: Unemployment Rate

3.3.2 Economy

The economy of Stellenbosch is relatively diversified with the manufacturing-; finance- trade-, and community services sectors jointly contributing 82% to local GVA. The contribution of agriculture is surprisingly low.

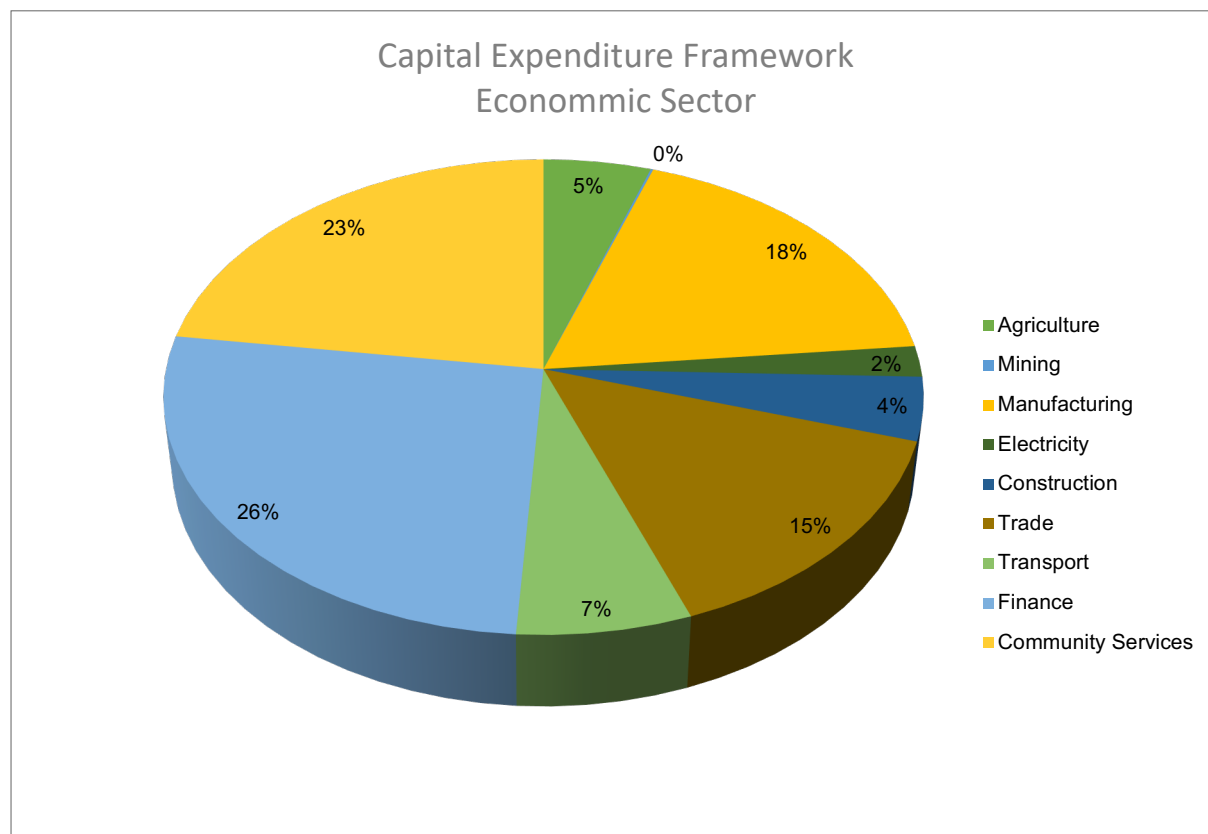


Figure 12: Economic Sectors

The average annual GVA growth rate of Stellenbosch for the past 5 years at 1.3% p.a. is lower than that of the Province at 1.7% p.a. and the National rate of 1.5% p.a.

Proportional growth was experienced in Finance's contribution to the local GVA, even though a declining trend is noted in Agriculture and Manufacturing, indicatives of a change in the economic structure is evident.

Table 4: Proportional Growth of economic Sectors

Subsector	2008	2017
Agriculture	6.5%	5.1%
Mining	0.1%	0.1%
Manufacturing	20.6%	18.2%
Electricity	1.7%	2.1%
Construction	4.1%	4.3%
Trade	14.0%	14.5%
Transport	6.4%	6.7%
Finance	24.4%	26.2%
Community Services	22.3%	22.7%

3.3.2.1 Employment

Since 2008 the number of people formally employed in Stellenbosch increased by just under 13%. This implies an average annual growth of 1.3%, which is lower than the annual population growth rate of 2%. Trade and Finance make a meaningful contribution to employment with each sector employing more than 14 000 people as illustrated in Graph 6 while the Agricultural sector is declining.

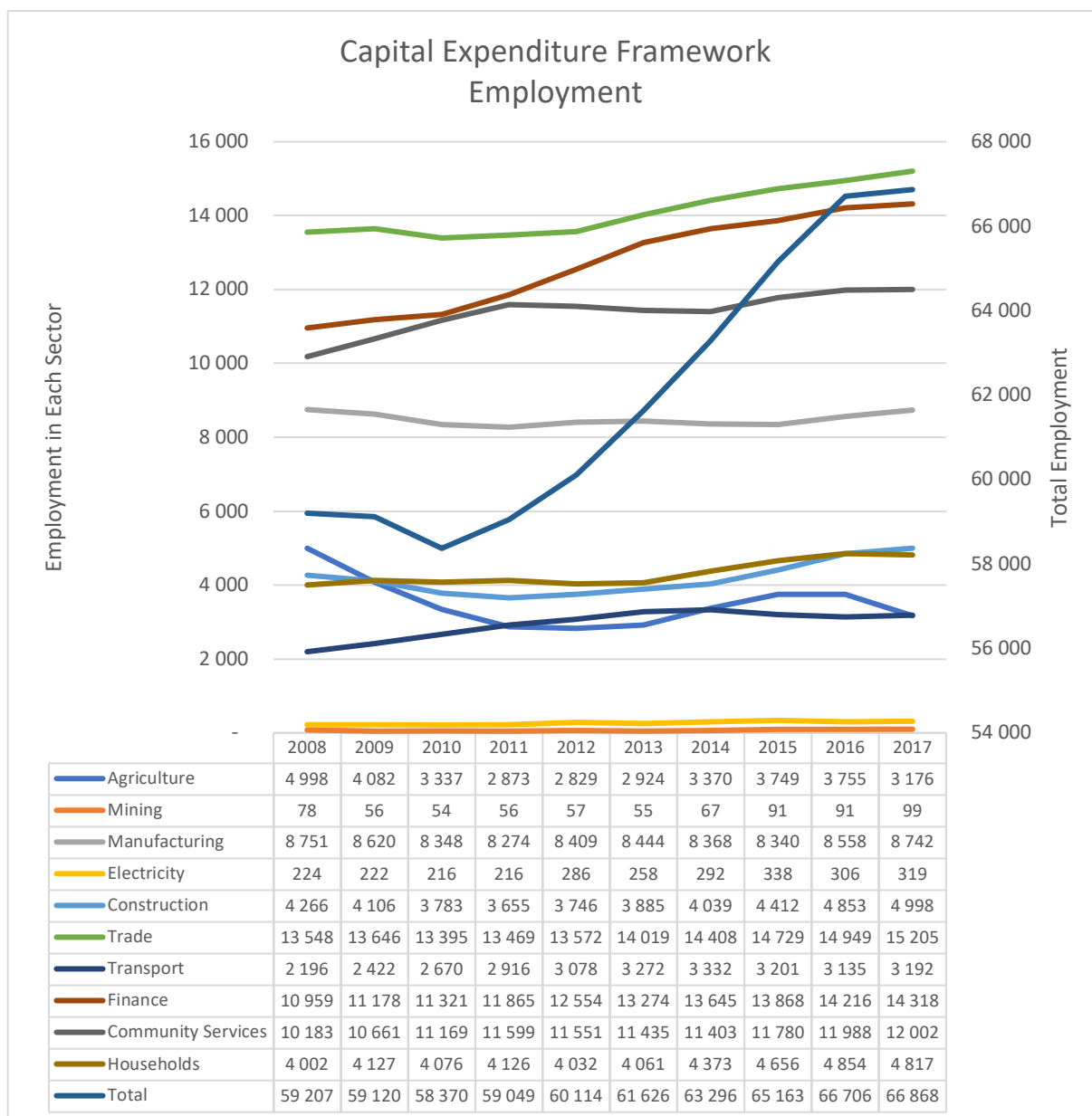


Figure 13: Employment

3.3.2.2 Tourism Spend

Tourism is a key economic driver and Tourism Spend has more than doubled since 2008 although number of visitors only increased by 15% over the same period. Tourism Spend in 2017 amounted to R 2.5 billion, which equates to 23.5% of GVA. Of the total tourism spend in the Cape Winelands DM; about 50% was spent in Stellenbosch LM.

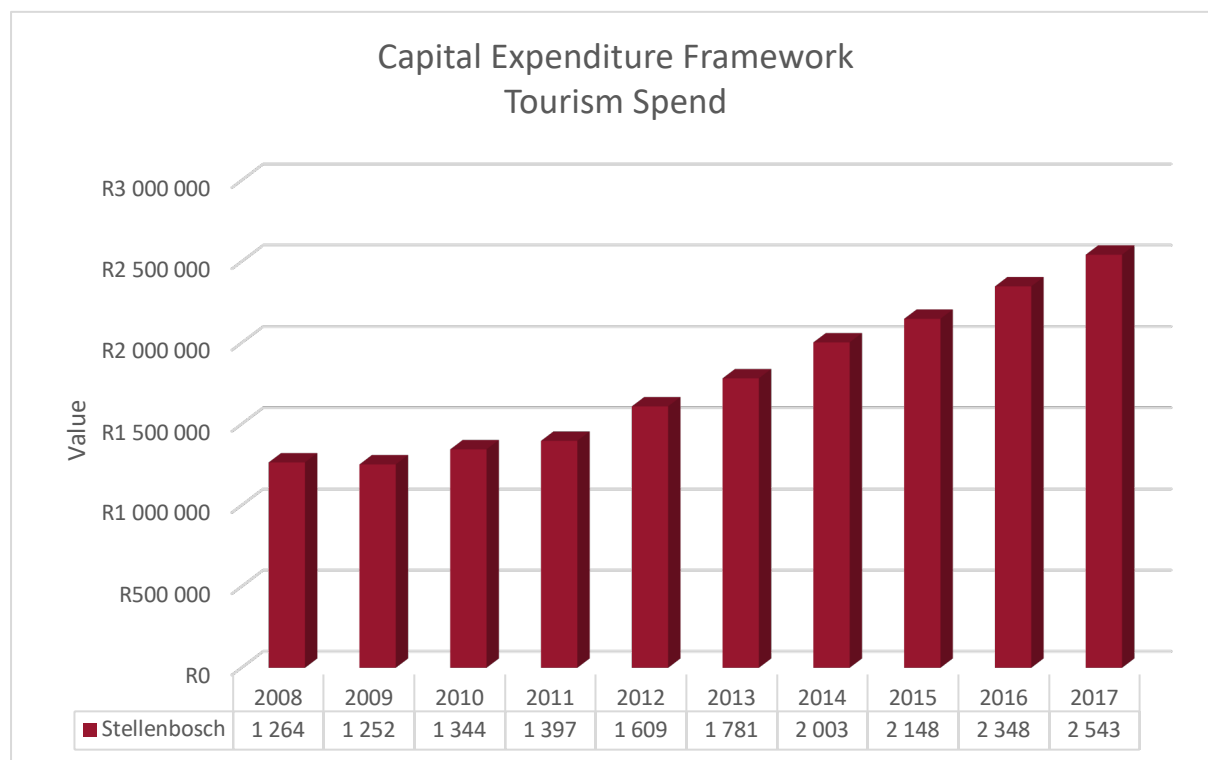


Figure 14: Tourism Spend

3.3.3 Household Infrastructure

The average Infrastructure Index (2008-17), a population-adjusted, access-to-service weighted index, which measures a region's overall access to household infrastructure, is 0.86⁸. This is higher than the National index of 0.74. Although service backlogs are relatively low, Housing backlogs contributed significantly to the decline in household infrastructure delivery.

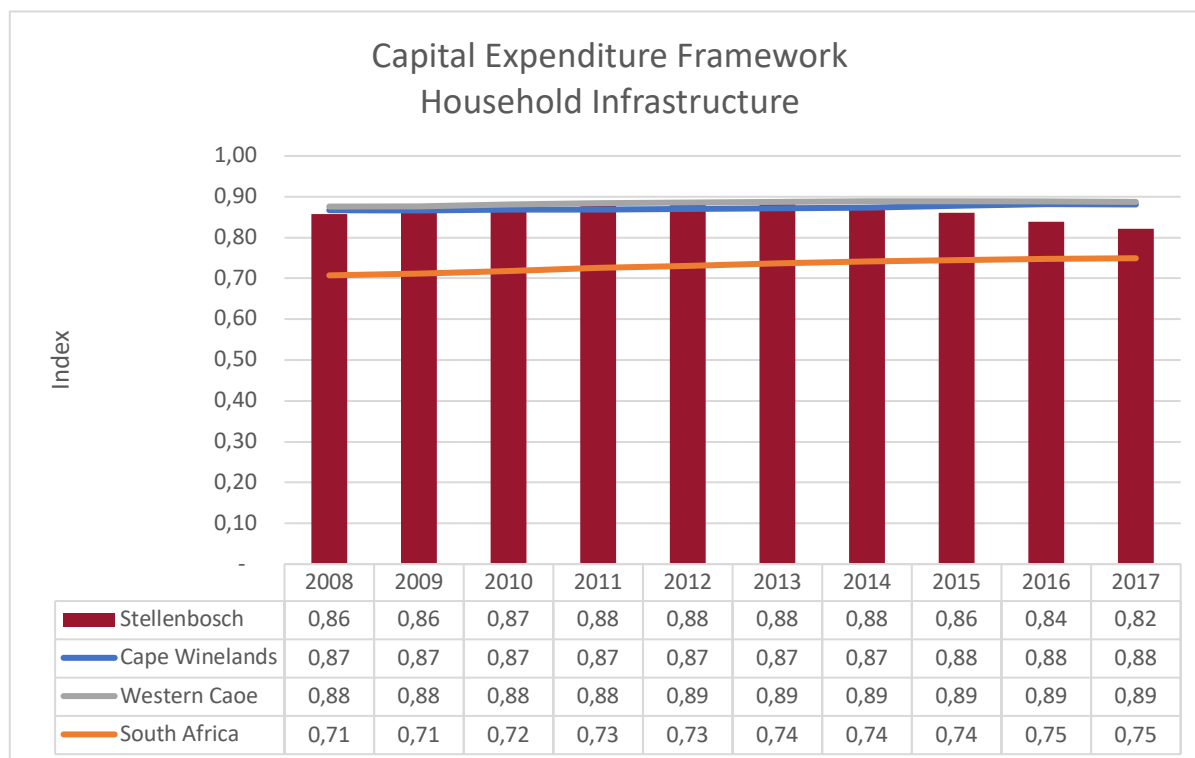


Figure 15: Infrastructure Index

⁸ A score of 1.00 would indicate a position where no backlogs exist. Stellenbosch's 0.86 implies a 14% on average level of backlogs. The index is, however, weighting based on cost of service basis – i.e. any backlog in housing (as is the case with Stellenbosch) would significantly impact on this index outcome due to this cost of delivering this service.

3.3.3.1 Household Formation

Stellenbosch experienced Household Formation increase of 20% between 2008 and 2017 which is below the Western Cape level, but higher than the national average. In 2017 there were approx. 50 000 households.

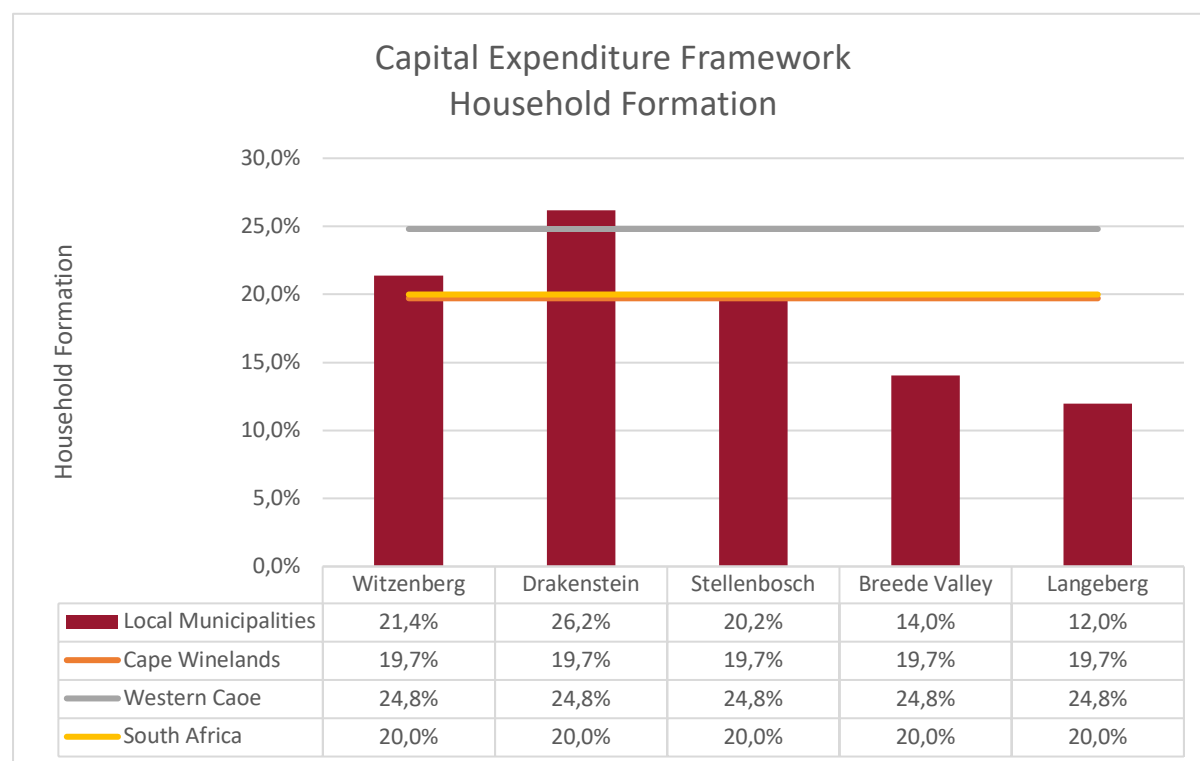


Figure 16: Household Formation

3.3.3.2 Household Infrastructure Provision

By comparing backlogs of sanitation, water, electricity and refuse removal in urban as well as non-urban areas one notes that the Stellenbosch municipality's overall infrastructure service delivery is high. Refuse removal and to a lesser extent, electricity provision reflects the remaining backlogs.

Table 5: Household Infrastructure Provision (2017)

Infrastructure	Cape Winelands		Stellenbosch	
Above RDP Level				
Sanitation	222 059	96,2%	48 019	96,5%
Water	225 813	97,8%	48100	96,6%
Electricity	221 550	96,0%	46 688	93,8%
Refuse Removal	203 040	87,9%	43 377	87,1%
Below RDP				
Sanitation	8 828	3,8%	1 764	3,5%
Water	5 084	2,2%	1 683	3,4%
Electricity	9 347	4,0%	3 095	6,2%
Refuse Removal	27 857	12,1%	6 406	12,9%
Total Number of Households	230 897	100%	49 783	100%

3.4 Stellenbosch Municipal Area: Demography

3.4.1 Basic population characteristics

Population dynamics, such as changes in population size, structure and distribution along with the associated demographic factors of births, deaths and migration affect all facets of human life. Planners in every sector should examine the population aspects of their sectors carefully and address their sector plans with reference to the relevant population issues.

The demographic profile and dynamics are critical infrastructure investment and largely determine the ability of the municipality to meet the operating consequences of its investment strategies.

3.4.1.1 Population and gender

The total population is the starting point. For any planning assessment, the total population is fundamental to the current and long-term demand for services and facilities. The table below shows the population for the three census periods with a gender split. From the time-related figures, inferences can be drawn on population growth or decline. (See details later in the report) Gender also serves as a proxy for economic conditions. Very generally speaking, male absenteeism can indicate that an area is shedding workers while a surplus of males might indicate the area is attracting migrant labour and hence higher expectation regarding economic growth and job creation. The table on age groups below will shed more light on this matter.

Table 6: Population and Gender

	1996	2001	2011	CS2016 ⁹
Males	51,224	57,850	76,158	
Females	53,411	61,129	79,536	
Population density (persons/ha)	1.15	1.40	1.83	2.04
Total Population	104,635	118,979	155,694	173,197

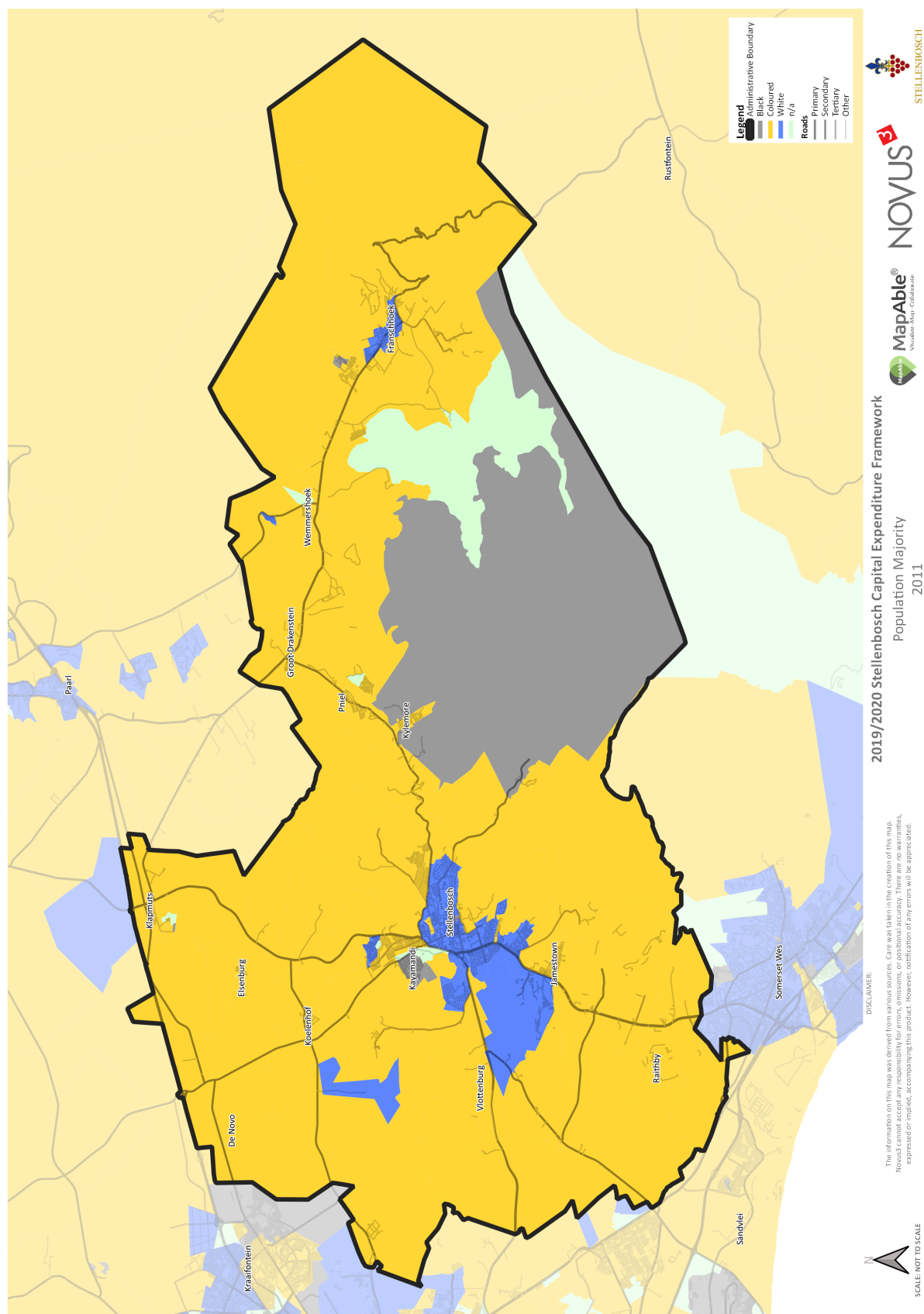
⁹ The StatsSA Community Survey does not give a gender breakdown per municipality

3.4.1.2 Population groups

Population groups need not be a central issue in development analysis. However, looking at the composition of the local population might help to explain current dynamics based on historical population settlement patterns.

Table 7: Population Groups

	1996	2001	2011	CS2016
Black	16,235	24,226	43,703	76,574
White	27,025	26,225	28,735	21,182
Coloured	59,039	68,259	81,329	75,386
Indian	264	269	620	72
Other	2,072	NA	1,307	
Total	104,635	118,979	155,694	173,197



Map 9: Population Majority 2011

3.4.1.3 Age groups

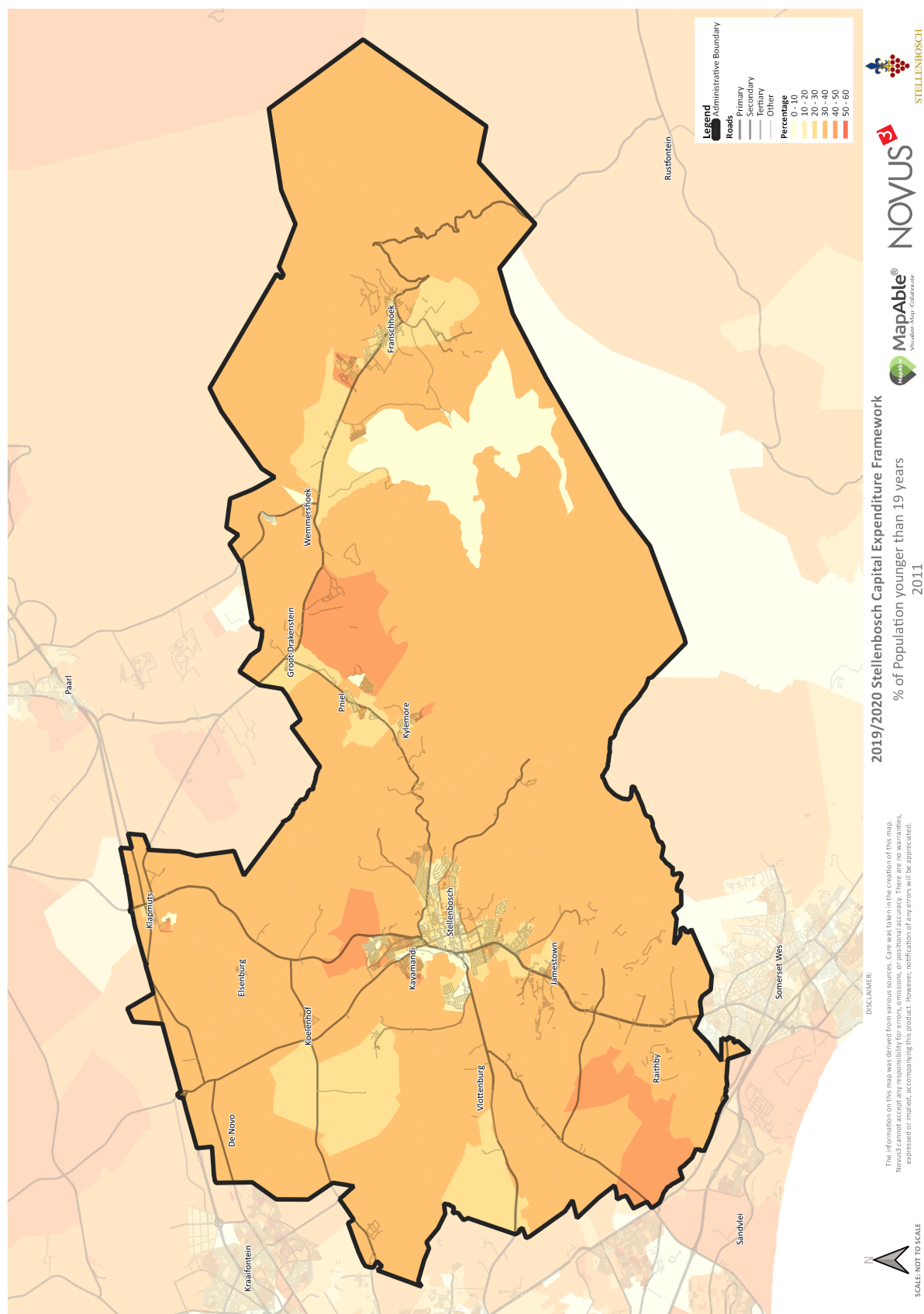
Age groups are very important in any demographic assessment. The age structure of the population provides a very direct indication of long-term demand for community and social services, housing and infrastructure demand. The table below only reflects on four age categories. The first category is the preschool population, and the second category is the extent of the school population, the third category is the economically active population, and the last group is the elderly population.

In considering age groups, the 20 to 65-year cohort is very significant. The male-female ratio in this age group is important. As explained above male absenteeism or a male surplus is a good proxy for migrant labour. Furthermore, the number of women in this age group is also a good indicator of the expected number of households in an area. Stellenbosch shows stability in this cohort with no or very little evidence of migrant labour.

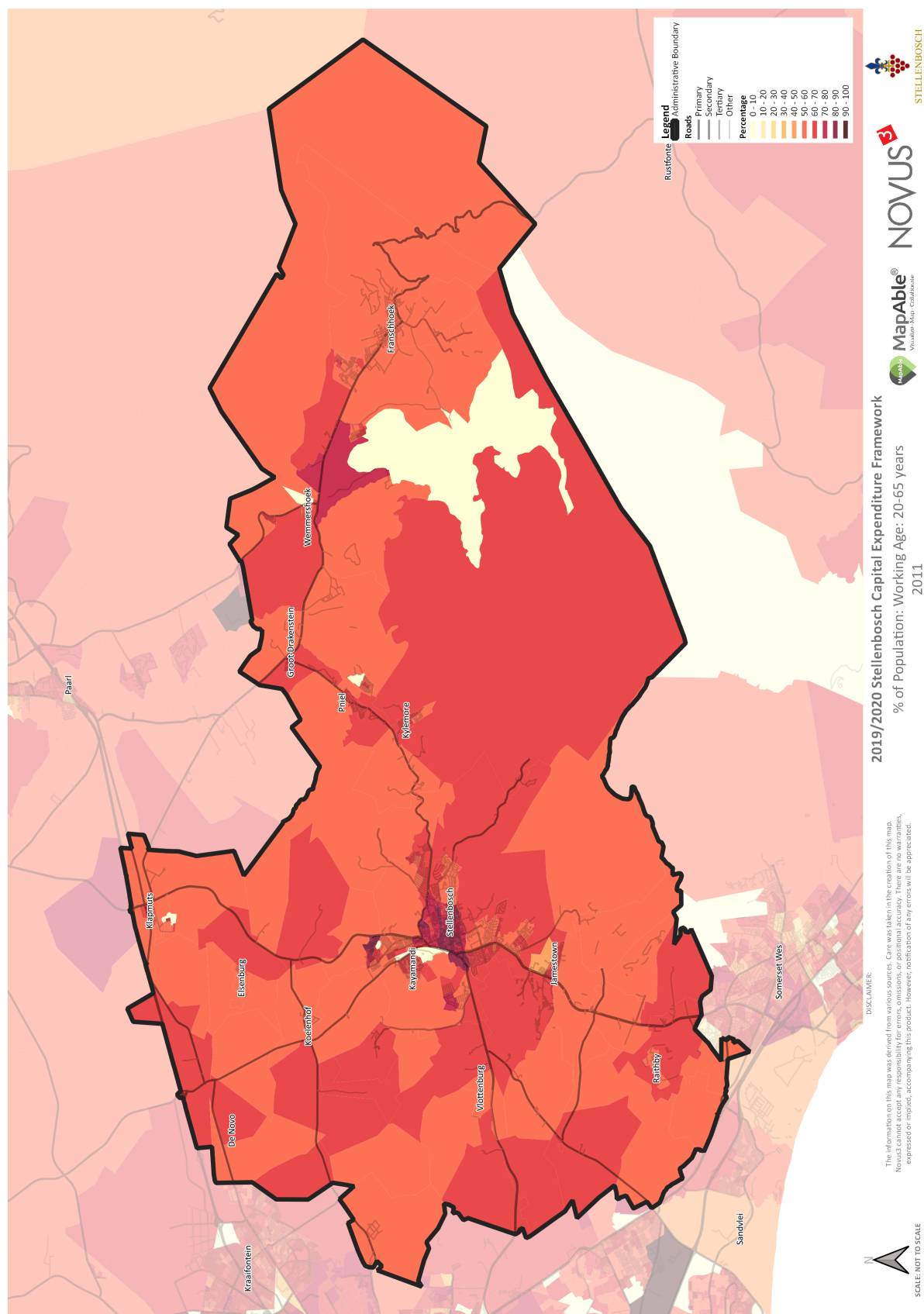
Table 8: Age groups¹⁰

	1996		2001		2011	
	Male	Female	Male	Female	Male	Female
<5	5,680	5,527	5,734	5,811	8,010	7,861
5 to 20	15,407	16,111	17,524	18,210	19,811	20,740
20 to 65	27,786	28,719	32,516	34,298	45,428	46,891
>65	1,637	2,412	2,077	2,810	2,909	4,045
Unspecified	715	642		0		0
Total	51,224	53,411	57,850	61,129	76,158	79,536
		104,635		118,979		155,694

¹⁰ The Community Survey 2016 does not provide a compatible age breakdown at municipal a level. According to CS2016, 23,8% was under the age of 14 years, 42.4% in the 15-35 year bracket, 28.7% was between 35 and 64 years and 4.1% above 64 years.



Map 10: % Of the Population – younger than 19 years (2011)



Map 11: % of the Population: Working age – 20 to 65 year (2011)

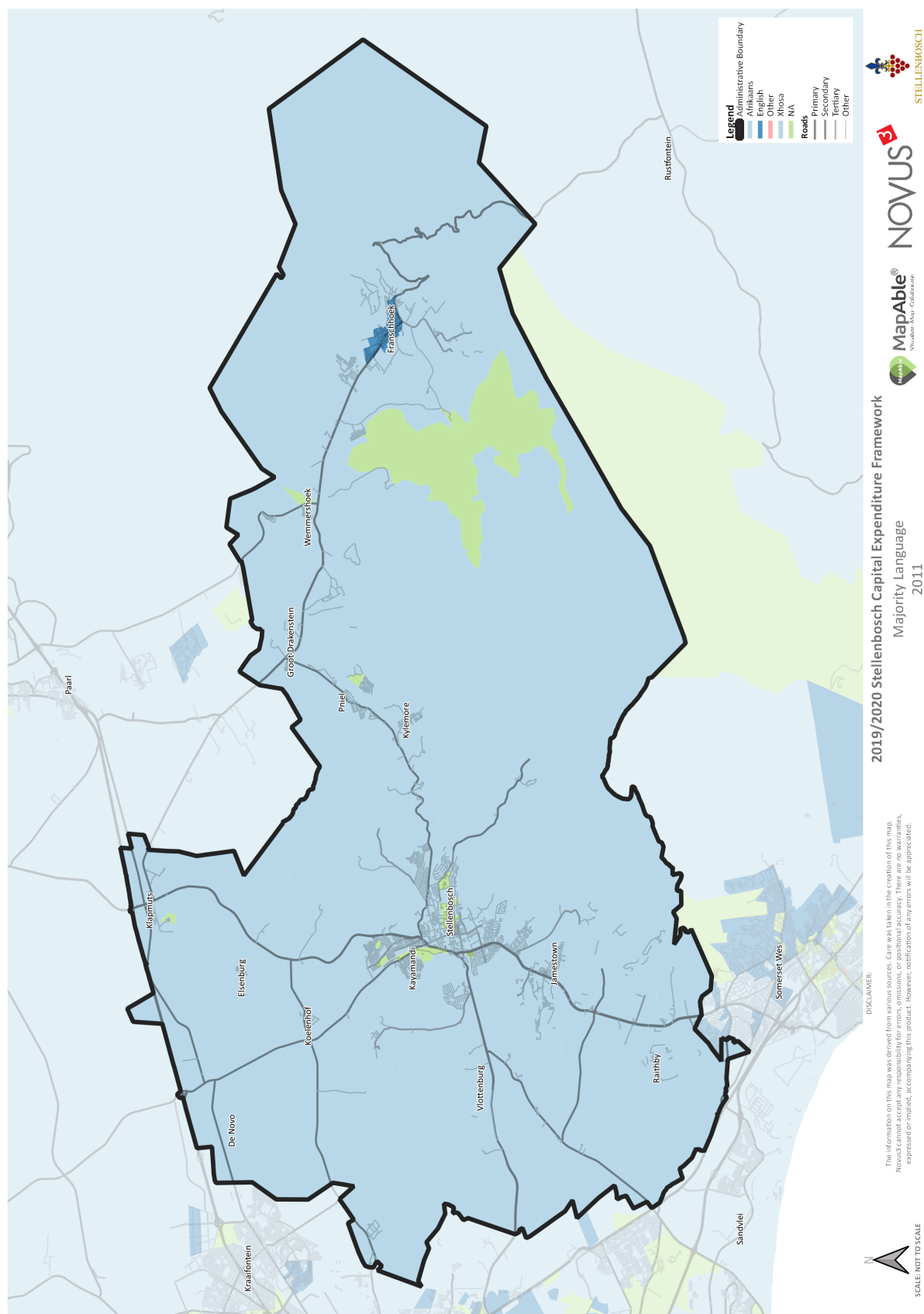
3.4.1.4 Language groups

Language groups display very strong spatial patterns in South Africa. These patterns and distributions have ramifications for education, labour markets, and labour relations. Its impact on the demand for community services, infrastructure and social facilities are, however, not significant for the planner.

Table 9: Language groups¹¹

	1996	2001	2011
Afrikaans	80,767	88,185	99,397
English	7,275	8,329	10,613
Ndebele	445	36	225
Sepedi	10	78	143
Sesotho	514	1,155	1,783
Siswati	7	30	48
Tsonga	8	54	103
Tswana	29	54	538
Venda	3	27	65
Xhosa	13,234	20,189	30,538
Zulu	45	147	369
Other	2,297	695	11,873
Total	104,635	118,979	155,694

¹¹ CS2016 do not provide data for municipalities.



Map 12: Majority Language (2011)

3.4.2 Household Characteristics

Population numbers relate to the demand for community and or social facilities. Households, on the other hand, determine the demand for infrastructure and housing. Furthermore, many planning indicators are measured in terms of household sizes and densities.

3.4.2.1 Households, size and density

Households are usually assessed in the context of the total population. This gives rise to density ratios and household size. The total number of households is always an important factor in determining the overall demand for infrastructure services and housing. Household density is an important indicator for settlement efficiency and plays an important role in urban planning and development strategies. Household size has an impact on the extent of consumption of goods and services. One should note that housing support strategies have affected household formation to the extent that there are often different rates of change between households and population. The basic household profile for the assessment area is shown in the table below.

Table 10: Total Households, size and density

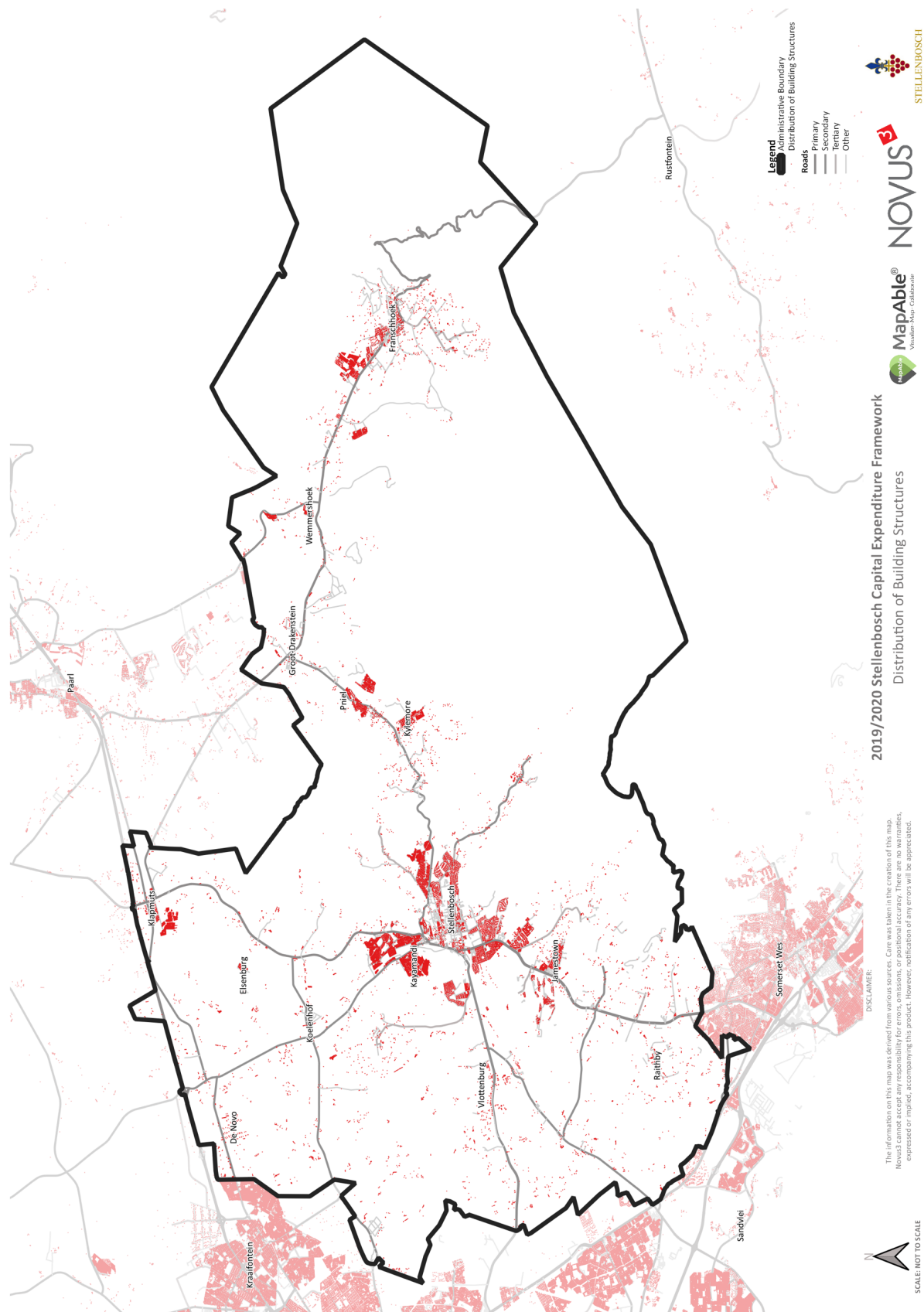
	1996	2001	2011	2016
Total households	26,154	35,165	43,328	52,274
Household density (households/ha)	0.29	0.41	0.51	0.62
Ave household size	4.00	3.38	3.59	3.3

3.4.2.2 Dwelling frame 2018 profile

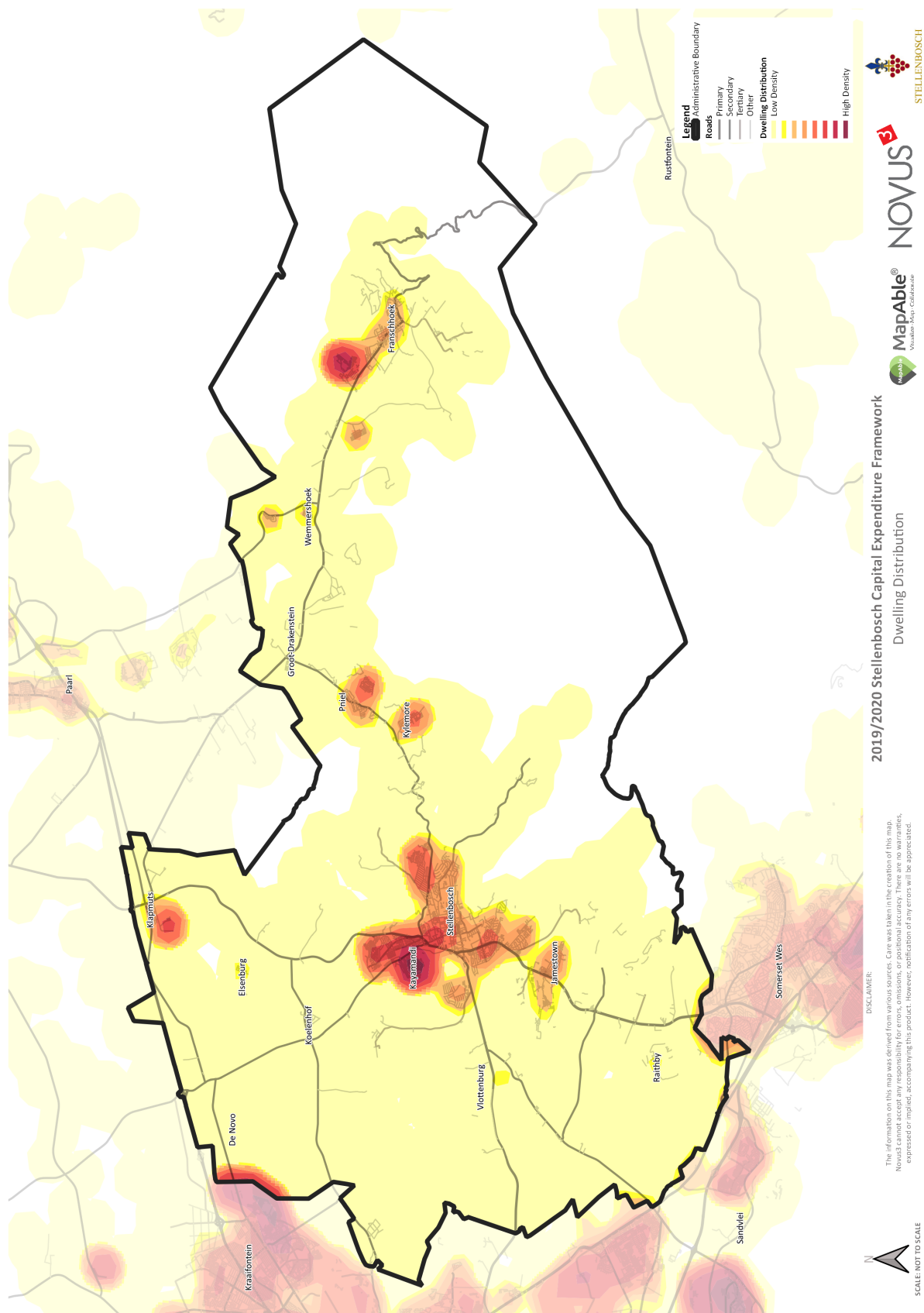
The Statistics South Africa Dwelling Frame data reports the following profile for the area. It indicates figure very similar to that of Census 2011 which is an indication, as is shown later in the report, of a slowdown in expected household growth over the longer term.

Table 11: Dwelling Frame 2018

Profile unit	Quantum
Dwelling unit	42,892
Business unit	905
Special dwelling institution unit	3,426
Service unit	209
Recreation unit	68
Other unit	4,825
Vacant unit	1,525



Map 13: Dwelling Frame 2018 – Building structures



Map 14: Dwelling Units per Km² (Kernel densities)

3.4.2.3 Head of household

Gender is an important aspect in any development environment. The gender of household heads relates to many socio-economic and cultural practices and factors. Therefore, the data below should be interpreted within the context of the environment that is being assessed.

Table 12: Head of Household by gender¹²

	1996	2001	2011
Male head of household	19,181	23,209	28,321
Female head of household	6,844	11,956	15,007
Unspecified	130	0	0
Total	26,154	35,165	43,328

3.4.2.4 Household income

Household income is used as one of the main poverty indicators in South Africa. Social support and subsidy systems are often based on household income parameters. When comparing household income, it is important to discount the impact of inflation. The figures in the table below were adjusted to 2011 Rand values. Increases in poverty are evident and with will serious consequences for service delivery and investment for the Municipality. High service levels and increasing poverty will lead to structural constraints on the Municipality and may eventually lead to cash flow challenges due to an increasing inability to pay for services.

Table 13: Household income per month in 2011 Rand values¹³

Income group (Rands)	1996	2001	2011
<1200	3,574	8,491	13,494
1 200 – 2 000	38	3,766	4,363
2 000 – 5 000	163	4,206	7,155
5000 – 10 000	791	6,600	7,381
10 000 – 20 000	2,039	8,208	5,098
20 000 – 50 000	7,577	2,572	3,678
>50 000	11,973	1,323	2,160
Total	26,154	35,165	43,328

3.4.2.5 Dwelling type

Housing backlogs and the demand for housing was and will always remain an issue in development and social support strategies in South Africa. The next table shows the different dwelling types in the area under assessment.

Table 14: Dwelling type

	1996	2001	2011	CS2016
Traditional	467	768	254	366
House made of bricks	14,143	18,681	24,817	33,971
Flat	3,026	2,959	4,353	
Multiple housing	2,508	1,198	2,644	
Dwelling in backyard	1,180	554	445	
Room/ granny flat	700	265	279	
Informal	2,937	3,478	7,496	17,829
Informal dwelling in backyard	601	1,111	2,442	
Other	592	6,150	598	107

¹² CS2016 does not provide compatible data. Data only available at district municipality level.

¹³ No compatible data available for 2016

Total	26,154	35,165	43,328	52,274
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Formal housing is clearly increasing, but the pressure from the informal settlements are clear.

3.4.2.6 Dwelling Ownership

Dwelling ownership data must be treated with circumspect. The data from the census below is based on the occupant's perceptions. There are many ownership systems available. If ownership is interpreted as freehold ownership in terms of a title deed, many areas in South Africa are excluded from this form of ownership. The table below reflects the position as reported for Stellenbosch in the censuses.¹⁴

Table 15: Dwelling Ownerships

Tenure	2001	2011
Rented	8,544	13,002
Owned but not yet paid off	4,533	4,312
Occupied rent-free	8,210	12,576
Owned and fully paid off	7,848	11,080
Other	6,031	2,358
Total	35,165	43,328

3.4.3 Migration

In a country where urbanisation plays a pivotal role in long-term development strategies and where the local economy is open, migration is an important issue.

3.4.3.1 Country of origin

Migration into the area of assessment from abroad is shown in the next table.

Table 16: Migration - country of origin¹⁵

Migration	1996	2001	2011
RSA Origin	95,112	117,811	139,577
SADC	794	379	1,851
Rest of Africa	49	61	373
Europe	876	568	482
Asia	71	30	123
Oceania	16	21	33
North America	29	72	21
South America	15	36	43
Unspecified/Other	7,673	NA	13,191
Total	104,635	118,979	155,694

Migration comprises between 8% and 9% of the population of Stellenbosch. This seems to be a fairly consistent figure of the past three censuses. However, the proportion of people from SADC and other African countries increased while people with a European origin decreased.

3.4.3.2 Province of previous residence

This section describes the movement of people within South Africa to the area under assessment.

¹⁴ 1996 census data is not comparable to the 2001 and 2011 census.

¹⁵ CS2016 only provides data at provincial level.

Table 17: Province of previous residence¹⁶

Migration	1996	2001	2011
Eastern Cape	4,131	3,928	4,368
Free State	331	699	352
Gauteng	1,559	2,004	2,275
KwaZulu-Natal	385	790	698
Limpopo	46	162	181
Mpumalanga	65	261	226
Northern Cape	496	885	431
North West	140	382	160
Western Cape	53,602	109,110	133,465
Unspecified/Other	43,879	759	13,538
Total	104,635	118,979	155,694

3.5 Education

Education is pivotal in the development process. Skill levels are derivatives of levels of education. The next table shows the profile of the highest level of education for the area.

Table 18: Highest level of education¹⁷

	1996	2001	2011
Under 5	9,240	9,584	22,172
No school	10,250	7,977	4,437
Primary	28,842	36,533	39,565
Secondary	25,307	31,556	43,569
Matric	16,016	19,571	27,110
Post matric	4,294	5,807	7,168
Graduate	4,010	4,111	3,813
Post-graduate	2,121	3,482	6,978
Other	4,555	357	883
Total	104,635	118,979	155,694

3.6 Employment

Employment and unemployment are some of the most challenging aspects of the South African development environment. The next table shows how employment and related factors have changed since 1996. Increasing unemployment obviously have serious consequences for the Municipality and its infrastructure investment and service delivery strategies.

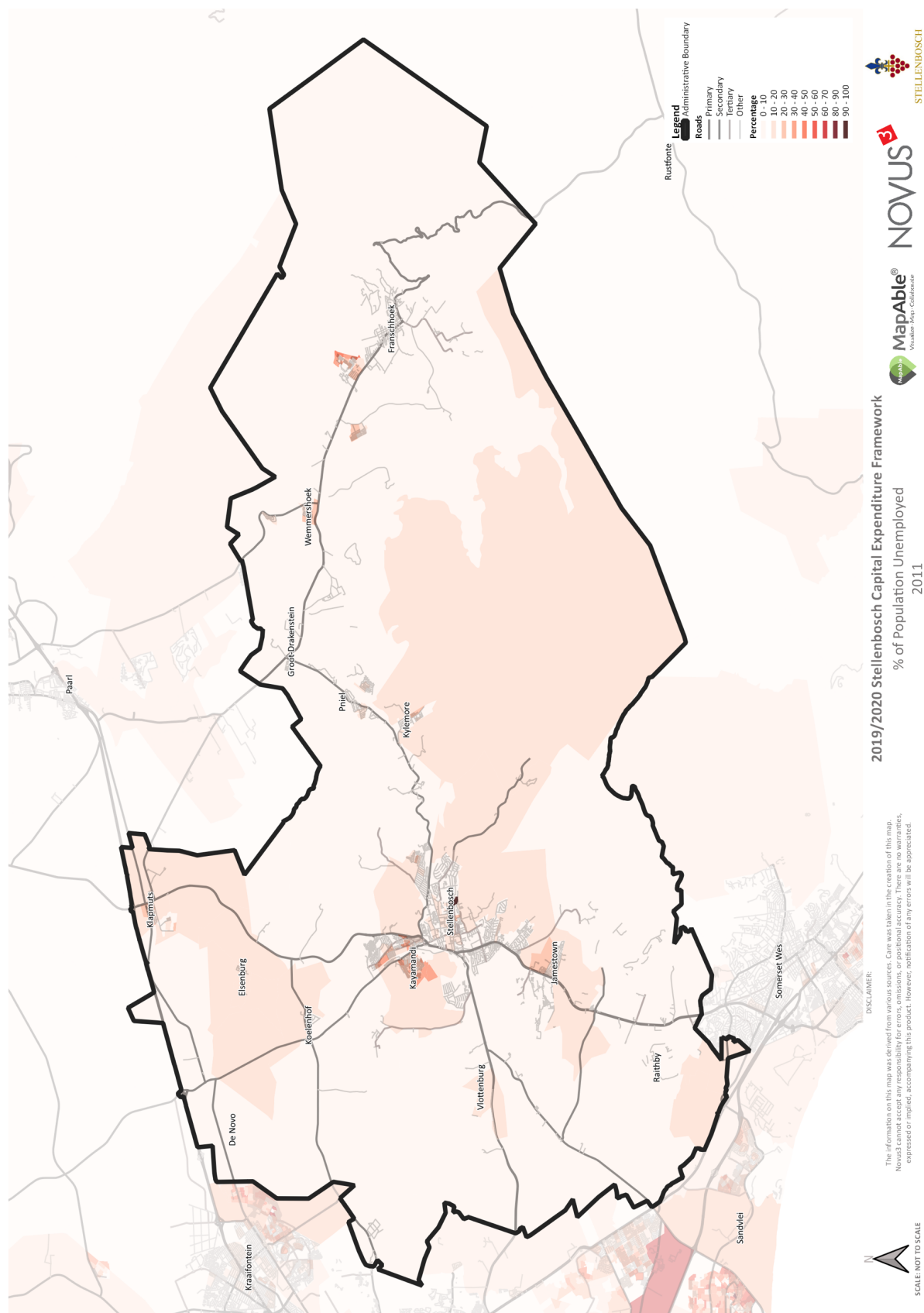
Table 19: Employment within the area¹⁸

Employment	1996	2001	2011
Employed	40,135	44,177	56,942
Unemployed	4,894	9,010	10,177
Discouraged	1,002	1,148	2,730
Not economically active	23,954	18,189	42,654
< 15 years	27,207	46,455	0
Unspecified/Other	7,444	NA	43,191
Total	104,635	118,979	155,694

¹⁶ CS2016 only provides data at provincial level.

¹⁷ CS2016 not in a comparable format

¹⁸ Employment was not reported in CS2016



Map 15: Percentage people unemployed in 2011

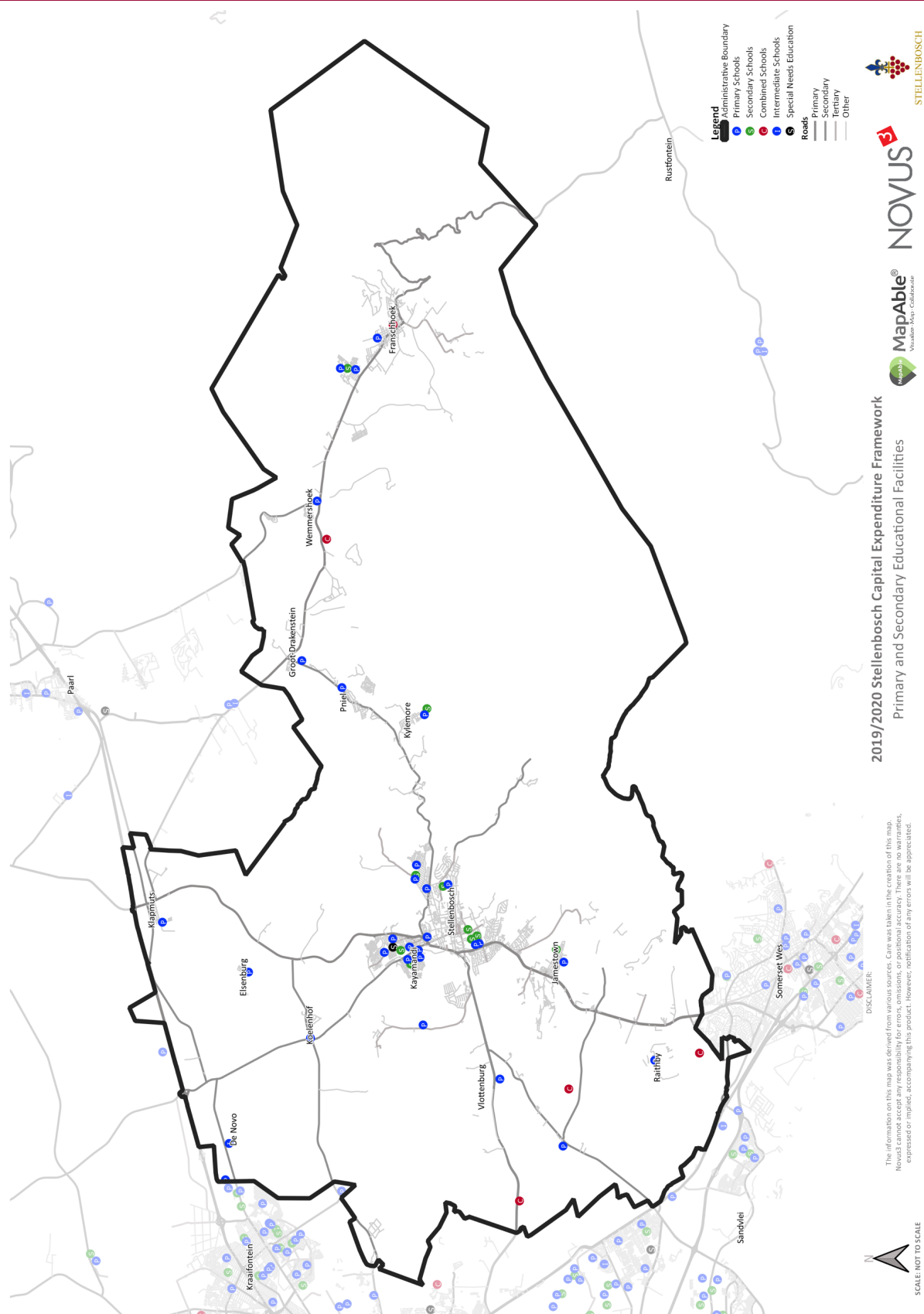
3.7 Social and community facilities

3.7.1 Education facilities

Education facilities include primary, secondary, combined and intermediate schools as listed in the database of the National Department of Education. Generally, the queries list educational facilities within the area.

There is a total of:

- 29 primary schools in the area;
- 11 secondary schools in the area; and
- 1 intermediate school in the area.



Map 16: Primary and secondary Educational facilities (2016)

3.7.2 Health Facilities

A distinction is made between public and private health facilities in the assessment.

There is a total of 14 public health facilities in the municipal area comprising of:

- 9 clinics;
- 2 satellite clinics;
- 1 community day centre;
- 1 district hospital; and
- 1 emergency service station.

There is only one private medical facility in the municipality, namely Stellenbosch Medi-Clinic with a total of 90 beds.

3.7.3 SAPS Stations

There are a total of 5 SAPS stations in the area.

Table 20: Police stations

Name of SAPS station in the area
Cloetesville
Franschhoek
Groot Drakenstein
Klapmuts
Stellenbosch

The following SAPS precinct(s) are affecting the area although the police stations for the precincts may be located outside the area of assessment¹⁹:

Table 21: Area covered by SAPS precincts

Precinct name	% of the assessment area
Brackenfell	2.27 %
Cloetesville	2.52 %
Franschhoek	23.92 %
Groot-Drakenstein	12.89 %
Klapmuts	3.97 %
Kleinville	0.08 %
Kraaifontein	1.17 %
Kuilsrivier	0.15 %
Somerset West	3.26 %
Stellenbosch	44.87 %
Villiersdorp	4.91 %

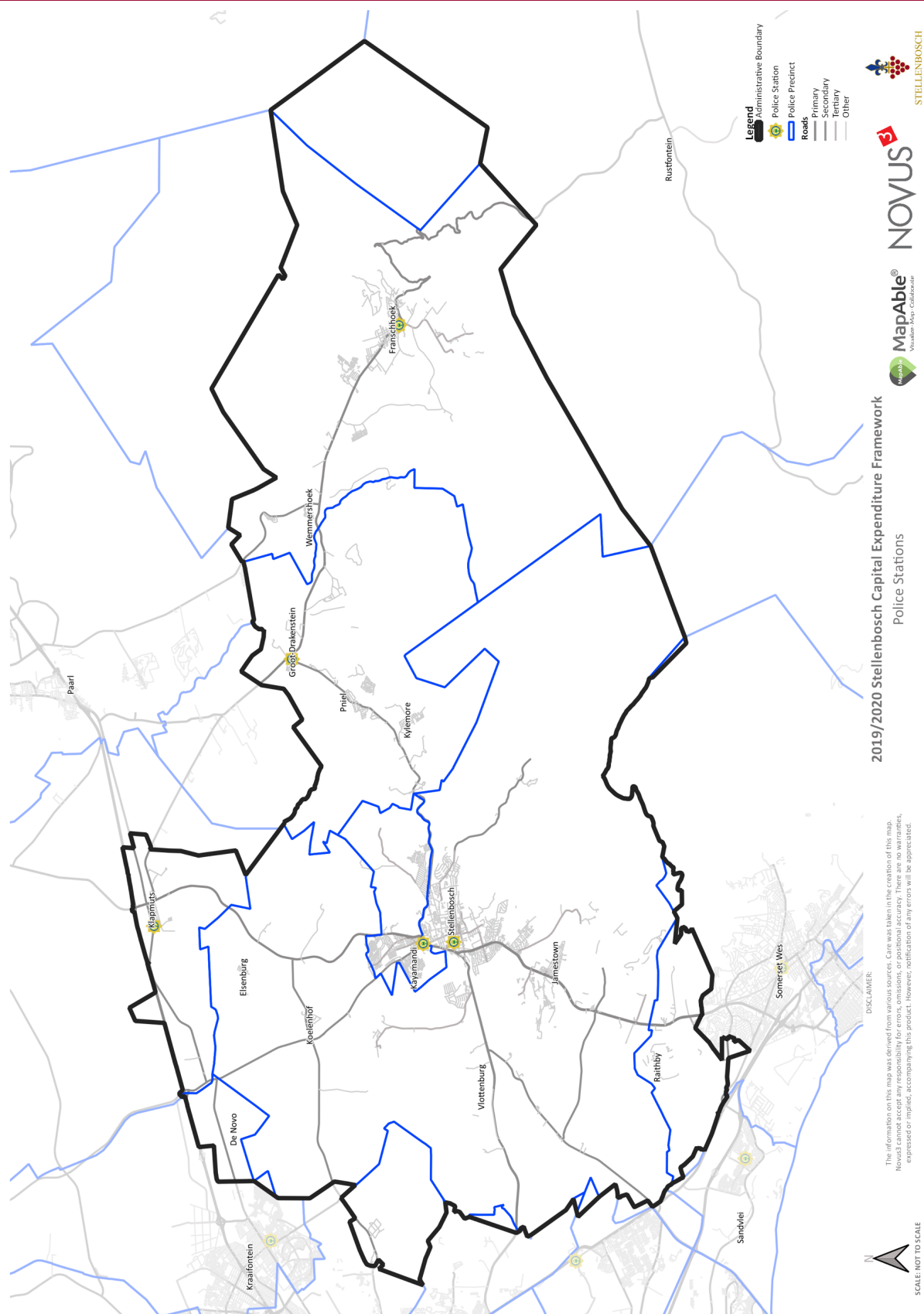
3.7.4 Lower courts

The courts of South Africa are the civil and criminal courts responsible for the administration of justice in South Africa. The following table below describes the courts within the area (if present).

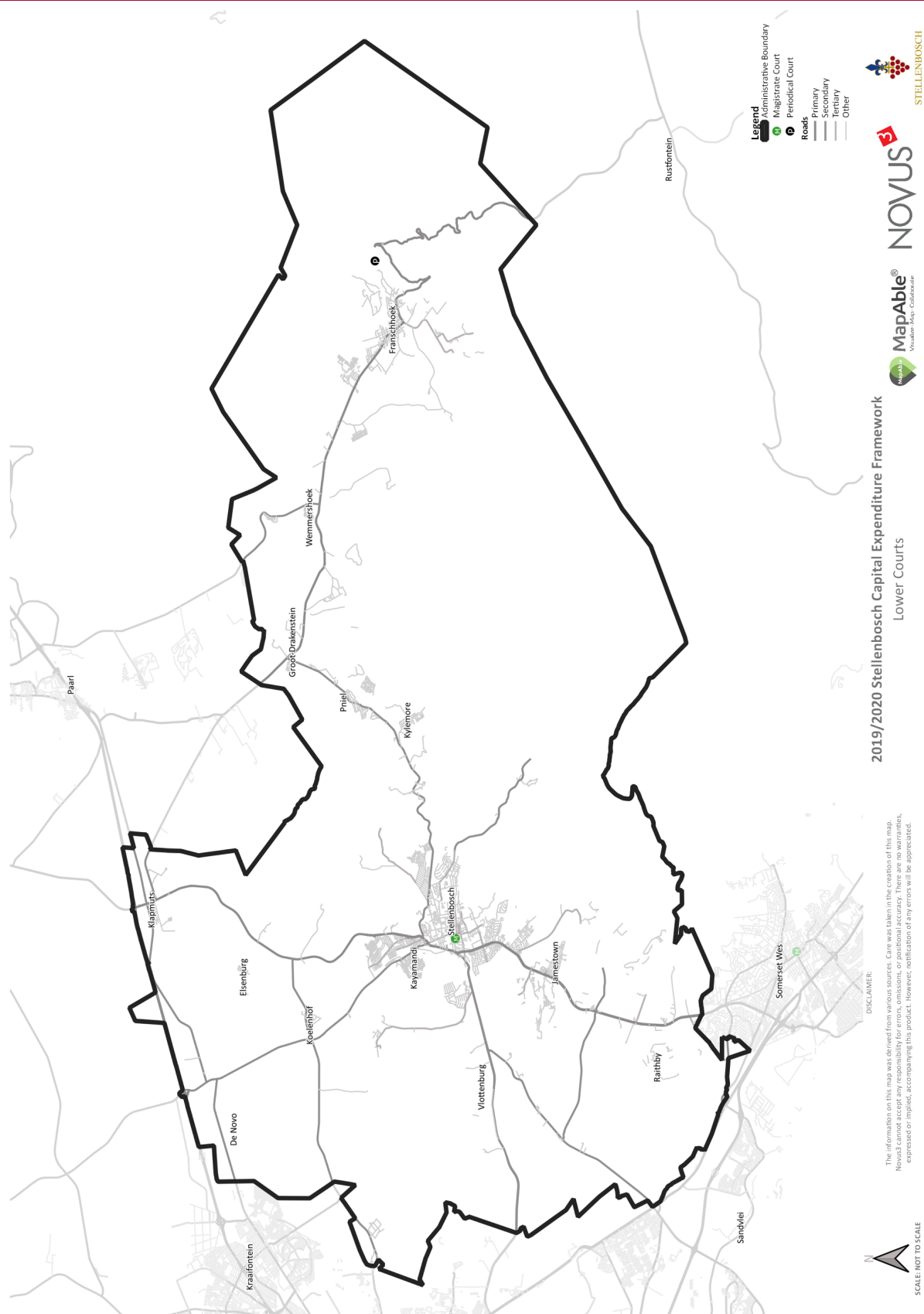
¹⁹ Please note that precinct boundaries do not align with cadastral boundaries. This causes “slivers” in spatial data which the reporting system picks up.

Table 22: Lower courts in the area

Type of court	Area/Office	Address
Magistrate Court	Stellenbosch	Alexander Street, Stellenbosch 7600
Periodical Court	Franschhoek	n/a



Map 17: Safety and security



Map 18: Lower Courts

3.8 Settlement footprint

3.8.1 Land cover

This section deals with land cover. The dataset has been derived from multi-seasonal Landsat 8 imagery, using operationally proven, semi-automated modelling procedures developed specifically for the generation of this dataset, based on repeatable and standardised modelling routines. The dataset has been created by GEOTERRAIMAGE (GTI) and is available as a commercial data product. The data is presented at 30m resolution. As a result, the accuracy of the query results is affected accordingly.

The following table lists the extent of land cover in the area under assessment. The results are expressed as hectares covered by a category.²⁰

Table 23: Land cover 1990 and 2014: Natural elements

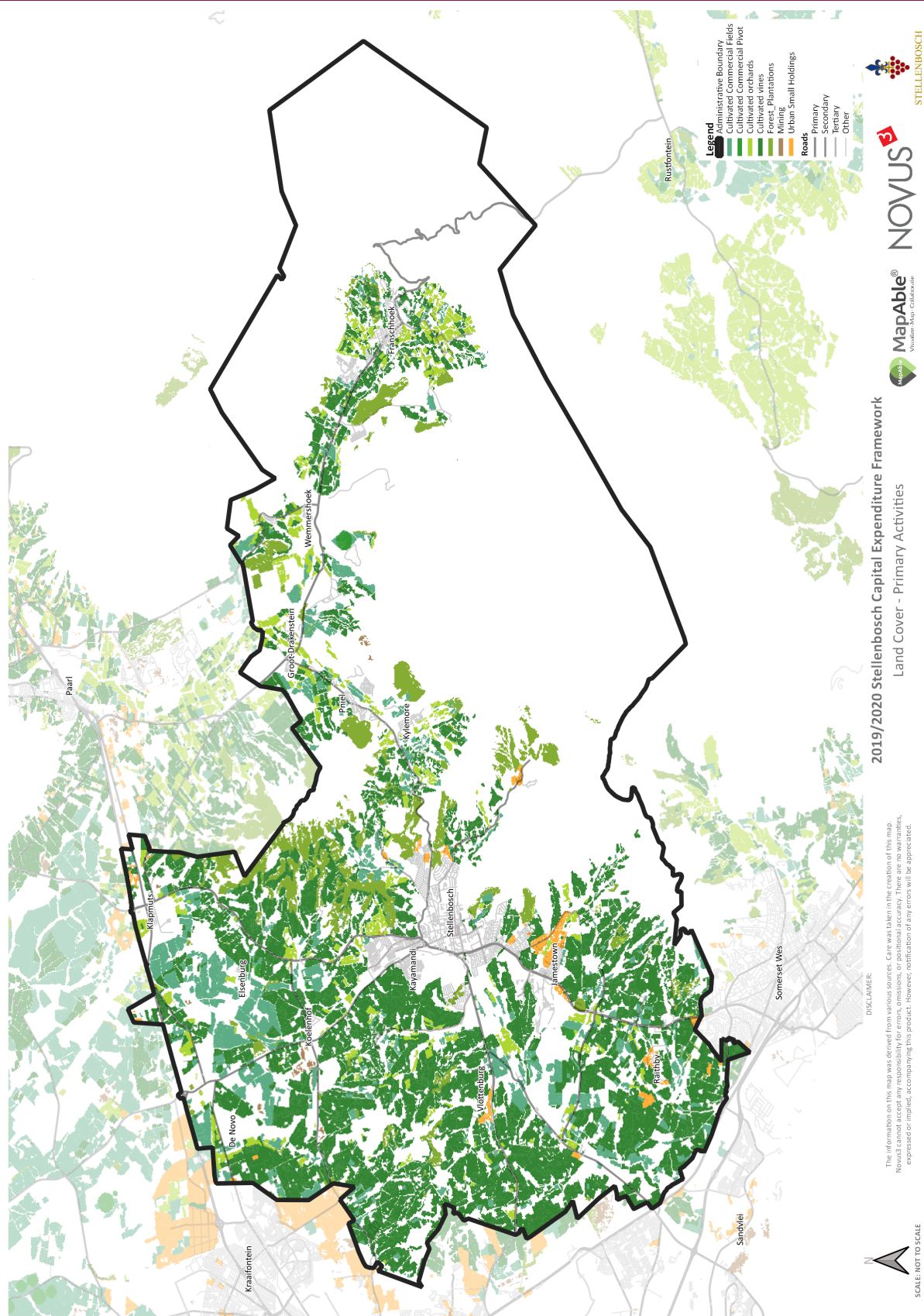
Land cover category	Extent of cover 1990 (ha)	Extent of cover 2014 (ha)
Erosion dongas		
Waterbodies	3509.6	3705

Table 24: Land cover 1990 and 2014²¹: Primary economic activities

Land cover category	Extent of cover 1990 (ha)	Extent of cover 2014 (ha)
Cultivated commercial fields	4215.52	3992.47
Cultivated commercial pivot		84.11
Cultivated orchard and vines	19690.08	19435.82
Sugarcane		
Smallholdings	187.48	419.6
Subsistence farming		
Forests & Plantations	8019.04	3010.11
Mining		61.63

²⁰ No data against a category implies that the category does not occur the assessment area.

²¹ No data against a category implies that in a particular land cover category does not occur the assessment area.

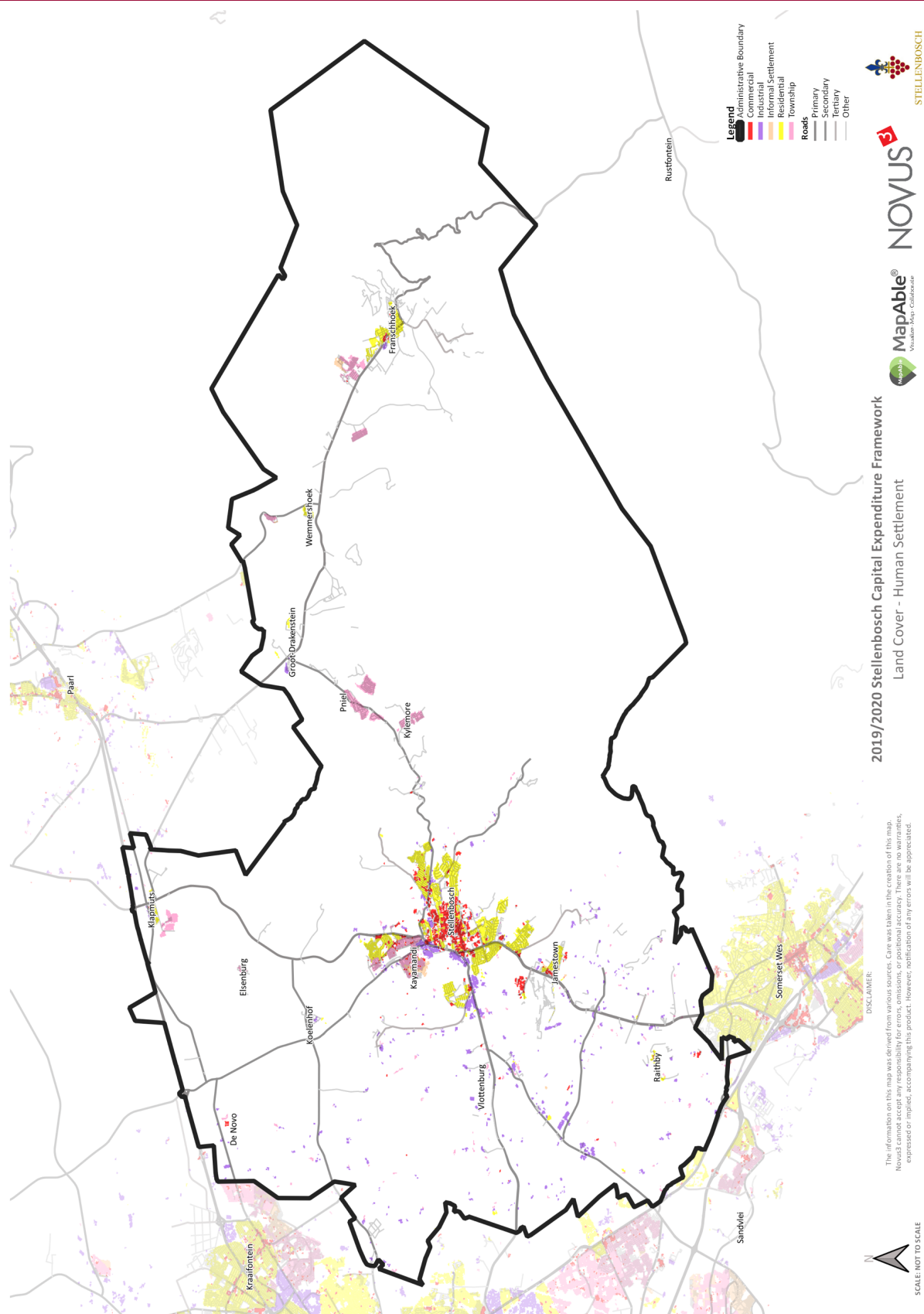


Map 19: Land cover – Primary activities

Table 25: Land cover 1990 and 2014: Human settlement

Land cover category ²²	Extent of cover 1990 (ha)	Extent of cover 2014 (ha)
Urban built-up	24.06	37.63
Urban commercial	339.57	349.73
Urban industrial	484.27	431.75
Urban residential	990.39	955.06
Urban townships	393.13	481.13
Urban informal	1.27	51.53
Rural villages		
Urban sports and golf	290.37	392.42
School and sports grounds	132.96	102.58

²² No data against a category implies that in a particular land cover category does not occur the assessment area.



Map 20: Land Cover – Human Settlements

3.9 Service access

Access to infrastructure services is a driving force for the betterment of all communities in South Africa. It is a core function of government and since 1994 access to services for previously disadvantaged communities was emphasised to the extent that it becomes the driving force of most government delivery policies. Initial approaches were to meet the health requirements of the World Health Organisation and hence the adoptions of the so-called RDP standards, later referred to as access to basic services. However, these policies have evolved over time for many reasons to the extent that many of the services currently contemplated by the government at all levels exceed the initial norms and standards.

3.9.1 Water services

Water services have been a very high priority in services delivery strategies over the past two decades. It is one of the key Millennium Goals adopted in 2000, which stated that countries should aim to halve the proportion of people without access to safe drinking water and basic sanitation by 2015. In terms of these goals, at least 50% of households should have access to at least basic services.

The table below shows the access to water has changed between 1996 and 2011.

Table 26: Access to water services 1996, 2001 and 2011

		Full	Intermediate	Basic	Below Basic	None	Total
1996	Total	19,580	2,795	2,879	660	240	26,154
	%	74.86 %	10.69 %	100.00 %	2.52 %	0.92%	100 %
2001	Total	25,005	4,066	2,706	3,143	245	35,165
	%	71.11 %	11.56 %	7.70 %	8.94 %	0.70 %	100 %
2011	Total	31,337	3,521	6,231	1,835	404	43,328
	%	72.33 %	8.13 %	14.38 %	4.24 %	0.93 %	100 %

The Community Survey 2016 shows 4.8% of households in Stellenbosch did not have access to drinking water. This is lower than in the 5.17% indicated for 2011 in the table above. However, in terms of numbers this there were 207 more households in 2016.

3.9.2 Sanitation services

Access to appropriate sanitation services is a very high health priority. Although sanitation services received a high priority from the government, there are always challenges, and this service did not achieve the same level of success as improved access to water services. This section shows the sanitation access for the area.

Table 27: Access to sanitation services 1996, 2001 and 2011

		Full	Intermediate	Basic	Below Basic	None	Total
1996	Total	21,960	NA	NA	2,348	1,846	26,154
	%	83.96 %	NA	NA	8.98 %	7.06 %	100 %
2001	Total	31,132	114	596	1,067	2,257	35,165
	%	88.53 %	0.32 %	1.69 %	3.03 %	6.42 %	100 %
2011	Total	39,437	319	206	2,331	1,035	43,328
	%	91.02 %	0.74 %	0.48 %	5.38 %	2.39 %	100 %

The Community Survey 2016 shows 1.7% of households (892 households) in Stellenbosch did not have proper sanitation. This is lower than in the 7.7% % indicated for 2011 in the table above.

3.9.3 Electricity services

Although electricity does not have the same implications for health as water and sanitation, access to electricity is very important for general development and especially education. Access to electricity was therefore always a high priority. The table below shows how access to electricity has changed since 1996. This table is based on access to lighting as a proxy for access to electricity.

Table 28: Access to electricity services 1996, 2001 and 2011

		Full access	No access	Total
1996	Total	23,530	2,625	26,154
	%	89.96 %	10.04 %	100 %
2001	Total	32,362	2,803	35,165
	%	92.03 %	7.97 %	100 %
2011	Total	40,305	3,023	43,328
	%	93.02 %	6.98 %	100 %

According to the Community Survey 2016, 93% of all household had access to electricity. This represents a growth in the backlog if household growth between 2011 and 2016 is accounted for.

3.9.4 Refuse removal

Solid waste management and refuse removal are important for health and environmental considerations. The table below shows how access to refuse removal services was reported in the previous three censuses.

Table 29: Access to refuse removal services 1996, 2001 and 2011

		Full	Intermediate	Basic	Below Basic	None	Total
1996	Total	19,946	257	2,415	2,632	905	26,154
	%	76.26 %	0.98 %	9.23 %	10.06 %	3.46 %	100 %
2001	Total	28,643	561	1,320	4,442	2,257	35,165
	%	81.45 %	1.60 %	3.75 %	12.63 %	0.57 %	100 %
2011	Total	37,672	1,068	1,347	2,053	1,188	43,328
	%	86.95 %	2.46 %	3.11 %	4.74 %	2.74 %	100 %

There were, deepening of how one categorises a basic service and whether a household is located in an urban area not, between about 1 253 and 6 400 household that may have less than a basic service.

3.9.5 Road network

Access to road services is not recorded the censuses. The next table shows the available roads data for the area.

Table 30: Road services in the area

Road type/class	Total (km)
National	22.96 km
Arterial	118.72 km
Secondary	37.35 km
Tertiary	555.81 km
Main (Urban)	54.33 km
Streets (Urban)	229.63 km

Section 4 Demand Quantification



4 Demand Quantification

4.1 Contextualisation

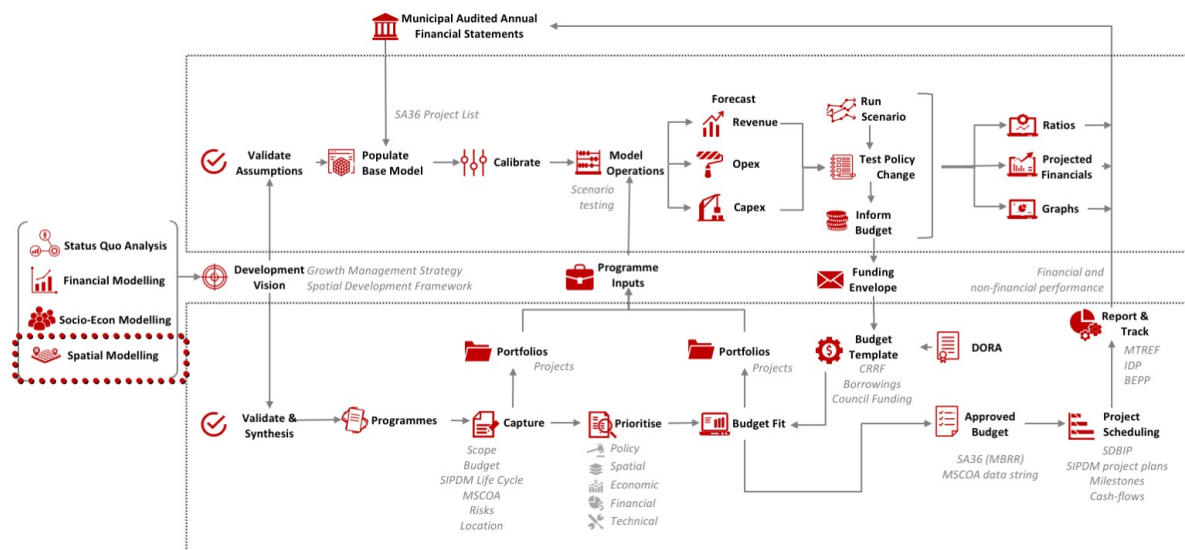


Figure 17: Demand Quantification

The capital investment emphasis within local government in South Africa over the past two decades was on extending services to poor households. This was done in an environment where major population shifts occurred, through accelerated urbanization and decreased growth and even population declines in rural areas. There are however other investment areas that will sustain or accelerate development and economic growth in any municipality. In this regard, three components contributing to the demand for investment should be considered:

- The number of existing households without access to services;
- The need to renew (rehabilitate and maintain) existing infrastructure, and;
- The growth in households and the economy.

In South Africa, the emphasis for the past two decades was mainly on addressing backlogs while demand created through growth received indirect and mostly inadequate attention to the extent that it often contributed to growing backlogs. Renewal of infrastructure was always recognised by infrastructure practitioners but is only recently that it started to feature in the policy debate and filtering through into formal government support strategies.

The purpose of this section can, therefore, be summarised as a process to identify the balance between the following three elements:

- Population Demand – population demand will determine the customer base served by the municipality and thus what the quantum of the services to be delivered should be;
- Level of Service choices – the level of service offered by the municipality for each infrastructure component varies, but has a significant effect on the affordability of services, and;
- Development Vision – the development vision in this instance do not necessarily cater to shock effects to the urban fabric but rather the policy regarding service provision of the municipality.

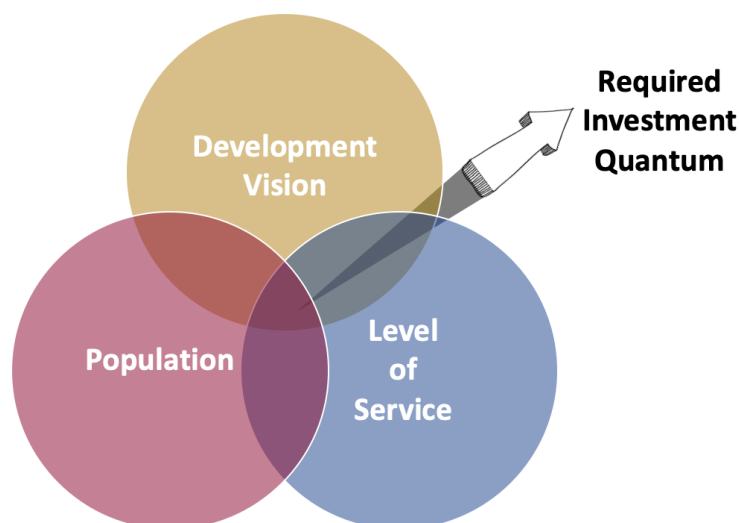


Figure 18: Elements contributing to the required investment quantum

4.2 Investment demand and growth - the infrastructure planning equation

Long-term customer growth is usually one of the biggest drivers of investment demand. The ability to address growth ensures, at a minimum, that backlog increases do not occur. It, however, adds to operating expenditure and the maintenance burden of a service provider which must be balanced against income.

The services, infrastructure delivery, and the relationship with demand and supply within a framework of sustainability are all embedded in the analytical framework shown in the diagram below. Within this framework, the demand for infrastructure services is determined by the extent of existing backlogs and household growth. This determines the need for new services, upgrading of existing services and the requirements for bulk infrastructure facilities.

When the requirements for the renewal of existing infrastructure are added, it defines the extent of the Municipality's capital investment programme. The demands of the investment programme are balanced against capital expenditure. The level of capital expenditure is a function of available funding and access to funding sources. To balance this equation the impact of capital expenditure, interest and redemption, operating and maintenance and bulk purchases must be smaller or equal to the total income sources. Financial sustainability implies that this equilibrium can be maintained over the long-term.

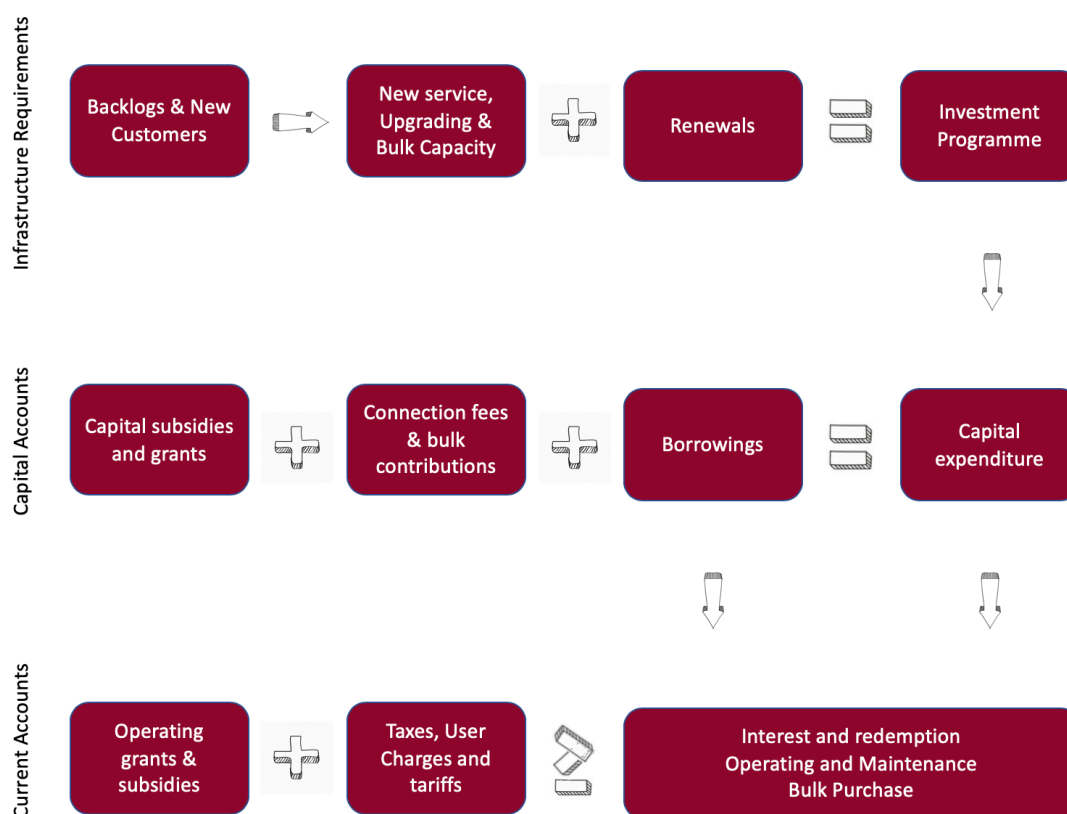


Figure 19: The Infrastructure Investment Planning Equation

Investment demand is a function of three core processes, namely:

- The investment required to address backlogs in services access.
- Investment to address the required maintenance and renewal of assets and renewal backlogs.
- The investment necessary as a result of the demand created through growth.

The manner in which this report deals with each of these elements was largely determined by the time available to appropriately address each of these components.

4.2.1 Dealing with infrastructure backlogs

The drive behind government infrastructure and service policies since 1994 was to eradicate service delivery and infrastructure backlogs. Many factors affect the extent of backlogs and the ability of municipalities to address these backlogs. The development of this CEF document did not include a backlogs study. Backlogs were appraised on existing, available data.

The table below shows the backlog situation as calculated from the 2011 Census. It was not possible to desegregate any 2016 figure or other data source on a sub-municipal level.

Table 31: Households with less than basic services in 2011

		Nodes		Farms		Municipality	
		Total	%	Total	%	Total	%
Population		113 972	73.19%	41 739	26.81%	155 711	100.00%
Households		33 535	77.40%	9 793	22.60%	43 328	100.00%
Water	%<Basic	5.67%		3.41%		5.16%	
	Households	1 902	85.06%	334	14.94%	2 236	100.00%
Sanitation	%<Basic	5.67%		11.17%		7.76%	
	Households	2 269	67.47%	1 094	32.53%	3 362	100.00%
Electricity	%<Basic	6.76%		7.84%		6.98%	
	Households	2 257	74.63%	767	25.37%	3 024	100.00%
Refuse	%<Basic	6.73%		25.47%		7.46%	
	Households	738	22.83%	2 494	77.17%	3 232	100.00%

The next table shows the extent of households with less than full services. Generally, the Municipality opted for providing full services.

Table 32: Households with less than full services

		Nodes		Farms		Municipality	
		Total	%	Total	%	Total	%
Population		113 972	73.19%	41 739	26.81%	155 711	100.00%
Households		33 535	77.40%	9 793	22.60%	43 328	100.00%
Water	% < full	29.85%		20.02%		27.63%	
	Households	10 011	83.62%	1 961	16.38%	11 972	100.00%
Sanitation	% < full	7.11%		15.38%		8.98%	
	Households	2 385	61.29%	1 506	38.71%	3 891	100.00%
Electricity	% < full	6.73%		7.84%		6.98%	
	Households	2 257	74.63%	767	25.37%	3 024	100.00%
Refuse	% < full	4.93%		41.07%		13.10%	
	Households	1 654	29.15%	4 022	70.85%	5 676	100.00%

When considering the tables above, it is important to note the following:

- The Municipality prefers higher levels or full services;
- Backlogs in 2011 were substantial, irrespective if measured against access to only basic services or measured against access to full services. In terms of access to at least basic services, none of the services had a backlog of more than about 3 300 households. That is 7.76% of all households. This equates to about 3.8 times the annual household growth rate. This is substantial and can have serious consequences for any capital investment programme. The same figures apply if backlogs are measured against access to full services. The notable exception is water services that then reported a backlog of nearly 12 000 units. However, full services are measured by in-house water connections. If a water connection to a stand is taken as the acceptable norm, the backlog figure falls to 6 500 units which remain high. It seems that the Municipality does, in the case of water apply basic service approach. However, the relative low sanitation backlog notwithstanding the high number of customers without a water connection on their stands. Waterborne sanitation does require a water connection;

- The bulk of the backlogs is in the urban nodes, with the extent of backlogs in Franschhoek particularly noticeable; and
- Backlogs in the rural nodes vary, but the number is small that will make general upgrading programmes in these nodes difficult.

Backlogs will remain a significant issue and will have to be further addressed.

4.2.2 Asset renewals and renewal backlog

Asset renewals and renewal backlogs are calculated from asset management registers and plans. Condition assessments are central to the process. The Municipality do have challenges in this regard, and it was therefore not possible to calculate the extent of asset renewals. The general rule is that asset renewals should more or less equate the annual depreciation on assets based on their useful economic life (EUL). Depreciation in accounting terms is not necessarily the same as depreciation in an asset management context. Renewal backlogs is a function of the condition of an asset and renewal backlogs occur where an asset's remaining useful life (RUL) is less than about 45% of its current replacement cost (CRC). This information is currently not available in the Municipality, and the extent of asset renewal could not be calculated.

4.2.3 Demand created through growth

In the processes to determine the demand created through growth, four elements were addressed. The first is land demand created through growth expectations. The second is was the capital requirements to meet the growing demand. Capital requirements reflect the cost of the five major infrastructure services, namely water, sanitation, electricity, roads and stormwater and refuse removal services.

4.2.3.1 Land demand

Land demand is determined by norms standards that were applied to various land uses. In this respect, a distinction was made between the demand for housing (residential demand) demand for other land uses which includes business industrial, opens space, community and social facilities. Land demand for residential purposes was restricted to the areas within the urban edges determined by the Municipality's spatial plans. It was assumed that the Municipality would prioritise infrastructure services in these areas. However, the land demand for the other uses is a function of thresholds to sustain them, and it was therefore calculated on the total growth demand in the municipal area. This is technically not 100% correct since the service function of these uses may exceed administrative boundaries. It gives recognition that development demand in a municipality may be determined factors outside its jurisdiction. In the case of this assessment, the long-term demand was only calculate based on growth expectations within the municipal area.

4.2.3.2 Long-term capital expenditure

Long-term capital expenditure is a function of land demand and the growth in customers. The results show the incremental cost for bulk and reticulated infrastructure. The point of departure is the assignment of appropriate service levels to each user or customer category. This is essentially a policy matter. For the purposes of assessment, a full services approach was adopted. This one aspect where different approaches and options can be introduced to assess the impact of service level approaches on the demand for capital and the operating impact thereof. The capital cost per service for each of the land use categories was calculated.

4.2.3.3 The operating impact of capital expenditure

It is relatively easy to calculate capital demand. However, the critical aspects are the long-term operating impact of capital expenditure. Furthermore, an over-investment in capital investment that does not address affordability may lead to structural impediments where the Municipality will find it difficult to meet the operating obligations of customers that cannot pay for services. This is usually one of the main contributors to cash flow constraints in municipalities.

Operating cost is based on a life-cycle approach that considers both maintenance and operating costs. All costs are marginal costs.

4.2.3.4 Consumption and use

Since consumptions and use norms are standards are used to calculate operating costs, the same values are used to calculate the demand for water, wastewater discharge, electricity consumption, the roads required and the solid volume and tonnage. The results are also presented as annual increments to reflect the impact of growth.

4.3 Modelling outcomes and growth impact forecasts

A development cost model²³ was used to model and forecast long terms investment demand.

4.3.1 Population growth as the basis for modelling demand

As indicated earlier the modelling is premised on population growth that is then translated into customer units. The first step was to do a population growth forecast. However, given the distinction between the areas within the municipality's urban edges (urban and rural) and the farming areas it was necessary to make forecasts based on these distinctions.

4.3.1.1 Step 1: Define population

The first step was to draw profiles for each of the areas based in order to determine the population and household spit.

Table 33: Distribution of population and households per Priority Development Area

Name	Type	Area (ha)	Population 1996	Population 2001	Population 2011	Households 1996	Households 2001	Households 2011
La Motte	Rural	69	906	50	1 606	154	10	397
Wemmershoek	Rural	66	190	554	859	38	104	202
Lanquedoc	Rural	184	1 483	3 527	7 233	286	687	1 645
Pniel	Rural	119	1 983	2 412	1 725	434	566	428
Groot Drakenstein	Rural	98	102	71	118	19	14	27
Raithby	Rural	45	262	34	440	72	8	105
Lynedoch	Rural	78	35	50	164	11	12	36
Vlottenburg	Rural	153	98	99	334	24	23	86
Koelenhof	Rural	182	150	118	448	39	28	97
Muldersvlei Cross Road	Rural	105	50	98	72	14	24	17

²³ The Development Cost Model V13 is propriety model develop and applied by Gildenhuys and Associates over the past 20 years to address the land use and capital expenditure demand and the operating consequences thereof in municipal service delivery.

Name	Type	Area (ha)	Population 1996	Population 2001	Population 2011	Households 1996	Households 2001	Households 2011
Stellenbosch	Urban	2 868	54 466	56 725	78 638	14 310	14 598	23 744
Franschhoek	Urban	485	5 692	7 909	14 521	1 322	1 928	4 785
Klapmuts	Urban	450	1 576	4 176	7814	341	972	1966
Municipal areas	Total	84 879	104 354	118 976	155 711	26 155	29 121	43 328
Urban nodes		3 803	61 734	68 810	100 973	15 973	17 498	30 495
Rural node		1 099	5 259	7 013	12 999	1 091	1 476	3 040
Farming areas		79 977	37 361	43 153	41 739	9 091	10 147	9 793
Total municipality		84 879	104 354	118 976	155 711	26 155	29 121	43 328

4.3.1.2 Step 2: Forecast population

The next step was to forecast the population of the municipal area.^{24 2526}

	Timeline	Values	Threshold population			Residential target population		
			Forecast	Growth rate	Growth increment	Population	Growth rate	Number of persons
5	1997	112 073	112 073	2.35%	2 576	63 322	1.04%	654
6	1998	114 454	114 454	2.12%	2 381	63 829	0.80%	507
7	1999	116 680	116 680	1.95%	2 227	64 217	0.61%	387
8	2000	118 906	118 906	1.91%	2 226	64 571	0.55%	354
9	2001	120 995	120 995	1.76%	2 089	64 819	0.38%	248
10	2002	123 564	123 564	2.12%	2 569	66 848	3.13%	2 029
11	2003	126 029	126 029	2.00%	2 465	68 847	2.99%	1 999
12	2004	129 308	129 308	2.60%	3 278	71 321	3.59%	2 473
13	2005	133 051	133 051	2.89%	3 743	74 087	3.88%	2 767
14	2006	134 844	134 844	1.35%	1 793	75 798	2.31%	1 710
15	2007	138 614	138 614	2.80%	3 770	78 648	3.76%	2 851
16	2008	143 451	143 451	3.49%	4 838	82 150	4.45%	3 502
17	2009	146 790	146 790	2.33%	3 339	84 837	3.27%	2 687
18	2010	149 891	149 891	2.11%	3 101	87 421	3.05%	2 583
19	2011	152 944	152 944	2.04%	3 053	90 009	2.96%	2 588
20	2012	156 187	156 187	2.12%	3 244	92 031	2.25%	2 022
21	2013	159 751	159 751	2.28%	3 564	94 246	2.41%	2 216
22	2014	164 088	164 088	2.71%	4 337	96 924	2.84%	2 678
23	2015	166 931	166 931	1.73%	2 842	98 724	1.86%	1 800
24	2016	171 434	171 434	2.70%	4 504	101 512	2.82%	2 788
25	2017	176 130	176 130	2.74%	4 696	104 586	3.03%	3 074
26	2018		180 793	2.65%	4 663	107 656	2.94%	3 070
27	2019		185 456	2.58%	4 663	110 743	2.87%	3 086
28	2020		190 120	2.51%	4 663	113 844	2.80%	3 102
29	2021		194 783	2.45%	4 663	116 962	2.74%	3 117
30	2022		199 447	2.39%	4 663	120 095	2.68%	3 133

²⁴ This figure was used calculate the demand for non-residential land uses. It represents the total municipal area.

²⁵ These figures represented the growth expectations with in the demarcated urban edges of the Municipality (nodal areas)

²⁶ The details of the figures might differ slightly from other figure due to projection and analysis approaches.

	Timeline	Values	Threshold population			Residential target population		
			Forecast	Growth rate	Growth increment	Population	Growth rate	Number of persons
31	2023		204 110	2.34%	4 663	123 243	2.62%	3 148
32	2024		208 774	2.28%	4 663	126 407	2.57%	3 164
33	2025		213 437	2.23%	4 663	129 586	2.52%	3 180
34	2026		218 101	2.18%	4 663	132 781	2.47%	3 195
35	2027		222 764	2.14%	4 663	135 918	2.36%	3 136
36	2028		227 427	2.09%	4 663	139 067	2.32%	3 149
37	2029		232 091	2.05%	4 663	142 228	2.27%	3 161
38	2030		236 754	2.01%	4 663	145 717	2.45%	3 489

The 2018 (base year) figures of 180 793 for the threshold population and 107 565 people for the residential target population are important. These figures were used to calibrate the model for the base year service as the departure point for the rest of the modelling and forecasts. The residential target population refers to the extent of the population that will require housing and the threshold population refers to the service population that determines the demand for land and facilities for non-residential customers in the municipal area.

It is important to note that growth rates are slowly declining. However, the impact in terms of the number still shows consistent growth. The more important aspect is highlighted in the next table.

Table 34: Change in population distribution from 1996 to 2030

Timeline	Urban	Rural	Farm	%
1996	52.19%	5.04%	42.8%	100.00%
2001	47.68%	5.89%	46.4%	100.00%
2006	49.09%	7.12%	43.8%	100.00%
2011	50.50%	8.35%	41.1%	100.00%
2016	49.77%	9.44%	40.8%	100.00%
2021	49.49%	10.56%	40.0%	100.00%
2026	49.20%	11.68%	39.1%	100.00%
2030	48.97%	12.58%	38.5%	100.00%

It is important to note that expectation is that, irrespective of growth numbers, the share of rural nodes will increase while both the population share of the urban nodes and farming areas will decrease. The implication is that the demand for infrastructure and services will grow in the rural nodes at a higher rate and that these nodes will become increasingly more important in the Municipality's development and service delivery strategies.

4.3.2 The scenario assessed

The scenario applied for assessment tried emulating the current policies and strategies of the Municipality as closely as possible. However, one should always consider that it is a model that in sometimes in a very crude way tries to replicate a very complicated system. It was, therefore, necessary to make some basic assumptions before the model was calibrated.

4.3.2.1 Assumptions and inputs on housing variables

As described above the model uses the growth in population to determine housing demand as well as ancillary uses. However, there are a number of key inputs that need to be considered. They are:

- Residential typologies, stand;
- The residential mix in terms of stand size; and
- Stand sizes assign to the different typologies.

Housing typologies for the CEF consist are configured around low, medium and high density residential development that includes different housing typologies. Stand, and households sizes were linked to these typologies. Household sizes and cars per were also considered. The following inputs were used:

Table 35: Assumptions on housing typologies, mix stand and household sizes

Residential types	Residential mix	Stand sizes	Household size
Single Residential: Low income	20.0%	350	4.00
Single Residential: Medium income	22.5%	600	3.75
Single Residential: High income	15.5%	850	3.20
Medium Density: Low income	15.0%	5 000	4.00
Medium Density: Medium income	7.0%	4 000	3.80
Medium Density: High income	5.0%	3 000	3.50
High Density: Low income	2.5%	5 000	3.50
High Density: Medium income	2.5%	4 000	3.25
High Density: High income	5.0%	3 000	2.80
Backyard dwellings	5.0%	Not applicable	2.00
Total/average	100.00%		3.59

The base distinction between income groups was derived from the 2011 census for the urban nodes. Backyard dwellers were included in the equation because of their demand to consume services. It was assumed that this would remain for the full assessment period although there are indications that household incomes have been decreasing.

4.3.2.2 Norms and standards for land use budgeting

The following land use norms and standards were used in the land use budgeting process.

Table 36: Land use norms and standards applied

Land use	Provision unit	Provision norm - persons/cars/ children	Ruling stand size m2
Residential			
Single Residential: Low income	units per net ha (net)	29	350
Single Residential: Medium income	units per net ha (net)	17	600
Single Residential: High income	units per net ha (net)	12	850
Medium Density: Low income	units per net ha (net)	40	5 000
Medium Density: Medium income	units per net ha (net)	30	4 000
Medium Density: High income	units per net ha (net)	25	3 000
High Density: Low income	units per net ha (net)	80	5 000
High Density: Medium income	units per net ha (net)	75	4 000
High Density: High income	units per net ha (net)	60	3 000
Backyard dwellings	units per household	0	0
Business			
Local Activity Centre	m2 per capita	2.00	2 500
Neighbourhood Activity Centre	m2 per capita	3.00	5 000

Land use	Provision unit	Provision norm - persons/cars/ children	Ruling stand size m2
Regional Activity Centre	m2 per capita	6.00	50 000
CBD	m2 per capita	7.00	50 000
Garages & filling stations	per 2500 cars	1.00	3 000
Industrial & storage			
Light industrial	ha per 7500 people	5.00	2 000
Heavy industrial	ha per 5000 people	3.00	20 000
Storage & warehousing	ha per 5000 people	8.00	10 000
Public spaces: recreation			
Parks: public	ha per 1000 people	0.33	5 000
Parks: private	ha per 1000 people	1.00	10 000
Sports fields	per 1000 housing units	3.50	10 000
Stadiums	per 125000 people	1.00	50 000
Community facilities: municipal			
Municipal office	per 75000 people	1.00	3 000
Community hall	per 25000 people	1.00	3 000
Local library	per 50000 people	1.00	1 500
Primary health clinic	per 50000 people	1.00	3 000
Fire station & Ambulance	per 75000 people	1.00	7 500
Ambulance station	per 75000 people	1.00	3 000
Cemeteries	ha per 5500 people	1.00	20 000
Public parking areas	m2 per capita	0.20	3 000
Market/trading area	ha per 10000 people	1.00	7 500
Taxi ranks	m2 per capita	0.10	3 000
Community facilities: other			
Post office	per 20000 people	1.00	1 500
Lower Court	per 100000 people	1.00	2 000
Post collection point	per 3000 housing units	1.00	200
Police station	per 80000 people	1.00	5 000
District hospital	per 300000 people	1.00	50 000
Community health centre	per 100000 people	1.00	2 000
Hospice	per 50000 people	1.00	2 000
Old age home	per 50000 people	1.00	10 000
Children's homes	per 200000 people	1.00	5 000
Thusong centre	per 70000 people	1.00	10 000
Place of worship	per 1000 people	1.00	2 000
Crèche	per 2800 people	1.00	2 000
Nursery school	per 5000 people	1.00	3 000
Primary school	per 5500 people	1.00	32 000
Secondary school	per 12500 people	1.00	45 000
After school centre	per 5000 people	1.00	2 000

The norms and standards were derived from different sources. The main sources were the Municipality's zoning scheme, cadastre from the office of the Surveyor General, the CSIR norms and standards for social and community facilities and then also calculated from the current land cover in the municipality. The approach was to calibrate the model on local data as far as possible.

Average stand sizes were calculated the zoning scheme data of the Municipality. The following data was used.

Table 37: Calculated land parcels sizes per zoning

Integrated zoning scheme categories	Unit Count	Area m2	Average size (m2)
Group Residential Zone	5 148	1 721 858	334
High Density Residential Zone	110	74 941	681
Less Formal Residential Zone	2 184	725 973	332
Medium Density Residential Zone	1 686	1 738 576	1 031
Single Residential Zone	8 534	7 282 915	853
Unknown	206	1 345 158	6 530
Agriculture Zone	220	33 247 798	151 126
Community Zone	122	780 437	6 397
Education Zone	120	2 021 340	16 845
General Business Zone	504	1 616 983	3 208
General Industrial Zone	78	588 360	7 543
Light Industrial Zone	188	441 975	2 351
Limited Use Zone	18	157 905	8 773
Local Business Zone	29	121 224	4 180
Private Open Space Zone	156	4 680 409	30 003
Public Open Space Zone	115	793 306	6 898
Public Roads and Parking	23	61 644	2 680
Resort Zone	576	488 634	848
Sub divisional Area	2	61 372	30 686
Transport Facility Zone	14	125 865	8 990
Utility Services Zone	58	1 657 600	28 579
Total average	20 091	59 734 273	2 973

Further refinements were made by calculating the number of persons per social and community facilities based on location and 2011 population data where appropriate these values were incorporated into the modelling.

Table 38: Current provision of social and community facilities (persons per facility)

	Urban Node	Rural Node	Farming	Total
Primary schools	5 610	1 857	10 435	5 369
Secondary schools	10 097	0	41 739	14 156
Intermediate schools	0	0	41 739	155 711
Combined schools	100 973	0	10 435	31 142
Public health facilities	8 414	6 500	0	11 122
Private health facilities	100 973	0	0	155 711
SAPS stations	25 243	12 999	0	31 142
Lower courts	100 973	0	41 739	77 856

For other uses, the area per person was calculated based on location and using land cover data for 2014 and the 2011 population figures.

Table 39: Current provision per person (m²) based on land cover

	Urban Node	Rural Node	Farming	Total
Urban built-up (hard surfaces)	1.93	0.20	4.29	2.42
Urban commercial	30.32	0.98	10.14	22.46
Urban industrial	14.37	16.00	63.70	27.73
Urban residential	85.93	22.23	14.01	61.34
Urban townships	21.60	123.70	24.49	30.90
Urban informal	4.72	0.00	0.94	3.31
Rural villages	0.00	0.00	0.00	0.00
Urban sports and golf	27.40	2.67	26.90	25.20
School and sports grounds	6.60	10.04	5.48	6.59
Small holdings	6.87	9.88	80.83	26.95

4.3.2.3 Service levels

Service levels relates to the technology used to supply a customer with a service. It should not be confused with a service standard which represents the qualitative aspects of service delivery.

The following describes the levels of services (LOS) available for the modelling process.

Table 40: Levels of service options for water

Level of services	Description
LOS00	No formal service
LOS01	Water point more than 200m distance
LOS02	Communal standpipe less than 200m distance
LOS03	Yard tap connection (single tap) and or limited supply with a dry on-site system
LOS04	Yard tap connection (single tap) and or limited supply linked to waterborne sanitation
LOS05	House/building connection unlimited metered supply
LOS06	Supply volume. is limited to 100mm connection, peak flow limited, and on-site storage required
LOS07	All requirements met up to 150mm pipe, 150mm connection

Table 41: Levels of service options for sanitation

Level of services	Description
LOS00	No formal service
LOS01	Bucket system
LOS02	Unventilated pit latrines and soakaways
LOS03	Ventilated improved pit (VIP)
LOS04	Dry composting toilet
LOS05	Communal chemical toilet
LOS06	Low flow (small bore) system with toilet structure
LOS07	Septic or conservancy tank with toilet structure
LOS08	Waterborne sewerage to each stand 110mm connection (no toilet structure)
LOS09	Waterborne sewerage to each stand 110mm connection, with toilet structure
LOS10	Waterborne sewer available, max connection size 150 mm or larger
LOS11	Waterborne sewerage, discharge load is above normal limits.

Table 42: Levels of service options for electricity

Level of services	Description
LOS00	No electricity service
LOS01	None grid electricity service
LOS02	Grid-connected and metered - Single phase 230V up to 20A or 4.6 kVA
LOS03	Grid-connected and metered - Single phase 230V up to 60A or 13.8kVA
LOS04	Grid-connected and metered - Three phase / Multiphase 230/400V up to 150A or 100kVA
LOS05	Grid-connected and metered - Bulk higher than 230/400V - not exceeding 11kV (at least 25 kVA)
LOS06	Grid-connected and metered - Bulk - exceeding 11kV (at least 100 kVA)

Table 43: Levels of service options for roads and stormwater

Level of services	Description
LOS00	No service
LOS01	Tracks (Graded)
LOS02	Gravel within 500m
LOS03	Gravel
LOS04	Paved 4.5m
LOS05	Paved 5.5m
LOS06	Paved 6.5
LOS07	Paved heavy capacity 7.5m

Table 44: Levels of service options for refuse removal services

Level of services	Description
LOS00	None
LOS01	Communal waste collection point
LOS02	Weekly kerbside waste removal
LOS03	Bi-weekly kerbside waste removal
LOS04	Bi-weekly waste removal from site 1
LOS05	Daily waste removal from site 1
LOS06	Bi-weekly waste removal from site 2
LOS07	Daily waste removal from site 2

Based on the service level options the following service levels were assigned to the land uses in the model.

Table 45: Level of service option per land use

Land use	Water	Sanitation	Electricity	Roads & stormwater	Refuse removal
Residential					
Single Res: Low Inc	LOS05	LOS09	LOS02	LOS04	LOS02
Single Res: Med Inc	LOS05	LOS08	LOS03	LOS05	LOS02
Single Res: High Inc	LOS05	LOS08	LOS03	LOS05	LOS02
Medium Dens: Low Inc	LOS05	LOS09	LOS02	LOS04	LOS02
Medium Dens: Med Inc	LOS05	LOS08	LOS03	LOS06	LOS02
Medium Dens: High Inc	LOS05	LOS08	LOS03	LOS06	LOS02

Land use	Water	Sanitation	Electricity	Roads & stormwater	Refuse removal
High Dens: Low Inc	LOS05	LOS09	LOS02	LOS05	LOS02
High Dens: Med Inc	LOS05	LOS08	LOS03	LOS06	LOS02
High Dens: High Inc	LOS05	LOS08	LOS03	LOS06	LOS02
Backyard dwellings	LOS00	LOS00	LOS00	LOS00	LOS00
Business		0.00%	0.00%	0.00%	0.00%
Local Activity Centre	LOS05	LOS08	LOS04	LOS06	LOS05
Neighbourhood Activity Centre	LOS05	LOS08	LOS05	LOS06	LOS05
Regional Activity Centre	LOS07	LOS08	LOS06	LOS07	LOS05
CBD	LOS07	LOS10	LOS06	LOS07	LOS07
Garages & filling stations	LOS05	LOS08	LOS05	LOS07	LOS03
Industrial & storage		0.00%	0.00%	0.00%	0.00%
Light industrial	LOS05	LOS08	LOS05	LOS06	LOS05
Heavy industrial	LOS07	LOS11	LOS06	LOS07	LOS05
Storage & warehousing	LOS05	LOS08	LOS05	LOS06	LOS04
Public spaces: recreation		0.00%	0.00%	0.00%	0.00%
Parks: public	LOS05	LOS00	LOS04	LOS05	LOS02
Parks: private	LOS05	LOS00	LOS04	LOS05	LOS02
Sports fields	LOS05	LOS08	LOS04	LOS06	LOS02
Stadiums	LOS05	LOS10	LOS04	LOS07	LOS02
Community facilities: municipal		0.00%	0.00%	0.00%	0.00%
Municipal office	LOS05	LOS08	LOS04	LOS07	LOS02
Community hall	LOS05	LOS08	LOS04	LOS06	LOS02
Local library	LOS05	LOS08	LOS04	LOS06	LOS02
Primary health clinic	LOS05	LOS08	LOS04	LOS06	LOS02
Fire station & Ambulance	LOS07	LOS08	LOS04	LOS06	LOS02
Ambulance station	LOS05	LOS08	LOS04	LOS06	LOS02
Cemeteries	LOS05	LOS08	LOS03	LOS06	LOS02
Public parking areas	LOS05	LOS08	LOS03	LOS06	LOS02
Market/trading area	LOS05	LOS08	LOS04	LOS06	LOS05
Taxi ranks	LOS05	LOS08	LOS03	LOS07	LOS05
Community facilities: other		0.00%	0.00%	0.00%	0.00%
Post office	LOS05	LOS08	LOS05	LOS06	LOS02
Lower Court	LOS05	LOS08	LOS04	LOS06	LOS02
Post collection point	LOS05	LOS08	LOS04	LOS06	LOS02
Police station	LOS05	LOS08	LOS05	LOS06	LOS02
District hospital	LOS06	LOS11	LOS07	LOS06	LOS05
Community health centre	LOS05	LOS10	LOS06	LOS06	LOS05
Hospice	LOS05	LOS08	LOS05	LOS06	LOS02
Old age home	LOS05	LOS10	LOS06	LOS06	LOS02
Children's homes	LOS05	LOS08	LOS07	LOS06	LOS02
Thusong centre	LOS05	LOS08	LOS08	LOS06	LOS02
Place of worship	LOS05	LOS08	LOS05	LOS06	LOS02
Crèche	LOS05	LOS08	LOS03	LOS06	LOS02
Nursery school	LOS05	LOS08	LOS03	LOS06	LOS02
Primary school	LOS05	LOS10	LOS05	LOS06	LOS02
Secondary school	LOS05	LOS10	LOS04	LOS06	LOS02

Land use	Water	Sanitation	Electricity	Roads & stormwater	Refuse removal
After school centre	LOS05	LOS08	LOS03	LOS06	LOS02
ABET/Skills training	LOS06	LOS08	LOS05	LOS06	LOS02

4.3.3 Calibrating the model

Credible forecasts are incumbent on the base year of the model reflecting the current situation in the municipality as closely as possible. The following table shows how the model was set up for the base.

Table 46: Reference points in the calibration of the model

Element	Base year 2018	Comments
General		
Population	180 793	Population projections were done off model and brought into the model as a departing point.
Area (ha)	3820.6	The area calculated from land cover data was 3 221ha. This is 2014 data. Given a modelled increase of about 100ha per annum, the base year figure is acceptable
Average stand size m ²	1089	The figure calculated from cadastre of urban-related zoning is 1 103m ² .
Population density (p/ha):	43	This is a simple calculation by dividing the housing population into the area of the development footprint. The development footprint excludes the area of roads.
Household density (hh/ha):	12	This is a simple calculation by dividing the households into the area of the development footprint. The development footprint excludes the area of roads.
Residential customer units	51 759	Census 2011 indicated 43 328 households and the 2018 D dwelling frame just more than 50 000 dwelling units. The figure as modelled seems to be acceptable
Other CUs:	1643	It was not possible to verify this figure, and it is accepted as modelled.
Total customer units	53 402	This is the sum of the previous two figures.
Total no of stands	31 497	This figure is higher than the 19 713 land parcels included in the cadastre for the zoning scheme. However, for modelling purposes, all informal dwelling were incorporated into the model as if they were on separate stands.
Roads area (ha)	554	The total roads in the municipality are in the order of 1 018km. and roads in the urban nodes amounts to 298km. This might be an underestimate.
Roads as % of the total area	15.6%	This low and one should have expected it to be closer to 20%
The current asset base (R'00)		
Water	1 032 455	20.9%
Sanitation	532 238	10.8%
Electricity	1 199 501	24.3%
Roads & Stormwater	2 093 910	42.3%
Refuse removal	86 854	1.8%
Total (R'000)	4 944 958	100.0%
Annual operating expenditure (R'000)		
Water	115 000	The figures, as modelled, is acceptable and get close the actual figures of the Municipality. The biggest challenge in modelling these figures is the allowances for management operations cost per services. Management operation cost is largely determined by local management configuration and how the Municipality organises itself to deliver services.
Sanitation	132 600	
Electricity	465 300	
Roads & Stormwater	121 498	
Refuse removal	97 350	
Total (R'000)	931 748	
Units consumed/generated		
Water (Ml/day)	32.5	These figures were difficult to verify. The figures for water and sanitation should be within acceptable limits. It is very difficult to present the figure for electricity with any confidence since there are very many factors that can affect the figure. There might be for example, how the extent of the Eskom supply area affects the figure is not clear. The same applies to refuse removal service.
Wastewater (Ml/day)	24.9	
Electricity (MWh/day)	6 131.6	
Roads & Stormwater (km/annum)	555.9	
Refuse removal (tons/day)	1 450.0	
Refuse removal (m3/day)	2 910.2	

4.3.4 The modelling outcomes

This section shows the results of the modelling process. The outcomes are presented as a high-level summary. It is important to note that the tables show incremental quantities includes of all service elements and components. Currently, it is not possible to model the impact of major interventions such as building a new wastewater treatment work of big investment to reconfigure the management of solid waste. Those aspects must be discounted in the project prioritisation process.

Although the results link the demand to a specific year, it is still important to take note of budgeting processes and the extent of lead times before project implementation can commence.

4.3.4.1 Land use demand

This table shows the summary of land use demand which is a result of the growth forecasts.

Table 47: Land use demand for the programme period 2019 to 2028

Land uses	No of units	% of total land	No of stand required	Area included in project
Totals	8 997	100.00%	5 573	951.71
Residential	8 997	43.85%	5 189	379.48
Single Res: Low Inc	1 571	6.35%	1 571	55.00
Single Res: Med Inc	1 886	13.07%	1 886	113.13
Single Res: High Inc	1 521	14.94%	1 521	129.26
Medium Dens: Low Inc	1 178	3.40%	59	29.46
Medium Dens: Med Inc	579	2.23%	48	19.30
Medium Dens: High Inc	449	2.08%	60	17.96
High Dens: Low Inc	224	0.32%	6	2.81
High Dens: Med Inc	242	0.37%	8	3.22
High Dens: High Inc	561	1.08%	31	9.35
Backyard dwellings	786	0.00%	0	0.00
Business		9.81%	74	189.25
Local Activity Centre		1.08%	37	5.55
Neighbourhood Activity Centre		1.62%	27	8.10
Market/trading area		0.40%	0	0.00
Regional Activity Centre		3.23%	5	25.00
Garages & filling stations		0.11%	2	0.60
Industrial		8.62%	133	71.60
Light industrial		2.16%	93	18.60
Heavy industrial		3.23%	13	26.00
Storage and warehousing		3.23%	27	27.00
Public spaces: recreation		10.13%	107	92.00
Parks: public		0.89%	30	15.00
Sports fields		3.64%	31	31.00
Stadiums		0.22%	0	0.00
Community facilities: Municipality		2.74%	13	17.50
Municipal office		0.02%	0	0.00
Community hall		0.06%	1	0.30
Local library		0.02%	0	0.00
Primary health clinic		0.03%	0	0.00
Fire station & Ambulance		0.05%	0	0.00
Ambulance station		0.02%	0	0.00
Cemeteries		1.96%	8	16.00
Public parking areas		0.11%	3	0.90
Taxi ranks		0.05%	1	0.30
Community facilities other		7.16%	57	48.74
Post office		0.04%	2	0.30
Police station		0.03%	0	0.00
District hospital		0.09%	0	0.00
Community health centre		0.01%	0	0.00
Hospice		0.02%	0	0.00
Old age home		0.11%	0	0.00
Children's homes		0.01%	0	0.00
Place of worship		0.21%	8	1.60
Crèche		0.38%	16	3.20
Nursery school		0.32%	9	2.70
Primary school		3.14%	8	25.60
Secondary school		1.94%	3	13.50
After school centre		0.22%	9	1.80
Technical college		0.54%	0	0.00
Roads totals		17.70%	0	153.14

4.3.4.2 Summary of general elements

The next two table show the context and main elements that define the expected level of capital and operating expenditure. The outcomes are shown per annum (first table and cumulative in the second table).

Table 48: Summary of totals per annum (annual increments)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Area (ha)	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5	97.5
Average stand size m ²	1102	1102	1104	1102	1102	1102	1102	1102	1102	1102
Population density (p/ha):	44	44	44	44	44	44	44	44	44	44
Household density (hh/ha):	12	12	12	12	12	12	12	12	12	12
Residential Customers	1 335	1 335	1 335	1 335	1 335	1 335	1 335	1 335	1 335	1 335
Other CUs:	30	30	30	30	30	30	30	30	30	30
Total customer units	1 365	1 365	1 365	1 365	1 365	1 365	1 365	1 365	1 365	1 365
Total no of stands	800	800	799	800	800	800	800	800	800	800
Roads area (ha)	9.6	9.6	9.5	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Roads as % of total area	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%

Table 49: Summary of totals per annum (Cumulative)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Population	4 663	9 327	13 990	18 654	23 317	27 981	32 644	37 308	41 971	46 635
Area (ha)	98	195	292	390	488	585	683	780	878	975
Average stand size m ²	1 102	1 102	1 104	1 102	1 102	1 102	1 102	1 102	1 102	1 102
Population density (p/ha):	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6
Household density (hh/ha):	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
Residential customers	1 335	2 670	4 005	5 340	6 675	8 011	9 346	10 681	12 016	13 351
Other CUs:	30	60	90	120	150	180	210	240	270	300
Total customer units	1 365	2 730	4 095	5 460	6 825	8 191	9 556	10 921	12 286	13 651
Total no of stands	800	1 600	2 399	3 199	3 999	4 799	5 599	6 399	7 199	7 999
Roads area (ha)	9.6	19.1	28.7	38.2	47.8	57.4	66.9	76.5	86.1	95.6
Roads as % of total area	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%

4.3.4.3 Summary of capital expenditure per service

The next to two tables shows the required capital expenditure (incrementally per annum and cumulative per annum) to accommodate the forecasted demand.

Table 50: Incremental capital expenditure: All services (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water	24 161	26 436	26 090	26 362	26 144	26 200	26 782	26 342	25 958	26 416
Sanitation	12 550	13 920	13 877	13 563	13 927	13 325	14 062	13 601	13 774	13 929
Electricity	28 505	31 287	31 154	31 497	30 863	31 397	32 087	31 350	31 132	31 126
Roads & Stormwater	49 957	54 372	53 499	53 801	54 428	53 480	55 423	53 745	53 136	54 316
Refuse removal	1 524	2 026	2 052	2 962	1 611	2 038	3 027	2 019	2 050	2 541
Total (R'000)	116 697	128 041	126 673	128 185	126 971	126 440	131 382	127 057	126 050	128 329

Table 51: Capital expenditure (all services (R'000) (Cumulative)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water	24 161	50 597	76 688	103 050	129 194	155 394	182 175	208 517	234 476	260 891
Sanitation	12 550	26 470	40 347	53 909	67 836	81 161	95 223	108 824	122 598	136 527
Electricity	28 505	59 792	90 946	122 443	153 306	184 703	216 790	248 140	279 271	310 398
Roads & Stormwater	49 957	104 329	157 828	211 629	266 056	319 536	374 959	428 704	481 840	536 156
Refuse removal	1 524	3 550	5 602	8 564	10 175	12 213	15 240	17 260	19 310	21 851
Total (R'000)	116 697	244 738	371 411	499 596	626 567	753 007	884 388	1 011 445	1 137 495	1 265 823

4.3.4.4 Summary of operating expenditure

One of the key elements that are often overlooked in capital investment planning is the operating consequences of capital investment. The next two tables show the forecasted operating and maintenance cost associated with the projected capital expenditure. It is an incremental cost and does not reflect on the revenue side and cost recovery strategies that the Municipality may apply.

Table 52: Ops & maintenance expenditure: All services per annum (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water	2 688	2 942	2 903	2 934	2 909	2 916	2 980	2 932	2 889	2 940
Sanitation	3 138	3 452	3 441	3 381	3 454	3 338	3 502	3 390	3 408	3 458
Electricity	10 944	12 135	12 118	12 303	11 884	12 246	12 467	12 235	12 125	12 063
Roads & Stormwater	2 900	3 155	3 105	3 121	3 159	3 103	3 215	3 118	3 085	3 152
Refuse removal	1 709	2 271	2 300	3 319	1 805	2 285	3 393	2 263	2 298	2 849
Total (R'000)	21 379	23 956	23 868	25 059	23 211	23 888	25 557	23 939	23 805	24 462

Table 53: Ops & maintenance expenditure: All services per annum (R'000) (Cumulative)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water	2 688	5 630	8 534	11 468	14 377	17 293	20 274	23 206	26 094	29 034
Sanitation	3 138	6 590	10 031	13 411	16 866	20 204	23 705	27 096	30 504	33 962
Electricity	10 944	23 079	35 197	47 500	59 384	71 631	84 098	96 333	108 458	120 521
Roads & Stormwater	2 900	6 056	9 161	12 282	15 441	18 544	21 759	24 877	27 961	31 113
Refuse removal	1 709	3 979	6 280	9 599	11 404	13 689	17 082	19 345	21 643	24 492
Total (R'000)	21 379	45 334	69 202	94 261	117 472	141 360	166 917	190 856	214 661	239 122

4.3.4.5 Summary of consumption and use

Service delivery is about consumption and use. The next two tables show the expected demand for water and electricity. Also, the estimated wastewater and solid waste generated was calculated. These number can be used to assess the impact of future demand on the existing capacities of bulk facilities.

Table 54: Incremental consumption and usage

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water (Ml/day)	0.7	0.8	0.8	0.8	0.8	0.8	0.9	0.8	0.8	0.8
Sanitation (Ml/day)	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6
Electricity (MWh/day)	136.1	156.8	148.0	158.6	155.9	167.4	164.2	156.0	146.6	159.0
Roads & Stormwater (km/annum)	13.3	14.5	14.3	14.3	14.5	14.2	14.7	14.2	14.2	14.4
Refuse removal (tons/day)	15.2	51.2	22.3	49.7	18.7	52.6	22.3	50.6	52.5	17.4
Refuse removal (m3/day)	30.6	102.7	44.7	99.7	37.7	105.3	45.0	101.5	105.2	35.2

Table 55: Cumulative consumption and usage

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Water (Ml/day)	0.7	1.6	2.4	3.2	4.0	4.9	5.7	6.6	7.4	8.2
Sanitation (Ml/day)	0.6	1.2	1.8	2.5	3.1	3.7	4.4	5.0	5.7	6.3
Electricity (MWh/day)	136.1	292.9	440.9	599.5	755.4	922.8	1 087.1	1 243.1	1 389.7	1 548.7
Roads & Stormwater (km/annum)	13.3	27.8	42.0	56.3	70.8	84.9	99.6	113.9	128.0	142.5
Refuse removal (tons/day)	15.2	66.4	88.7	138.4	157.1	209.7	232.1	282.6	335.2	352.6
Refuse removal (m3/day)	30.6	133.4	178.1	277.8	315.5	420.9	465.9	567.3	672.6	707.8

Section 5 Integrated Infrastructure Investment Framework



5 Integrated Infrastructure Investment Framework

5.1 Contextualisation

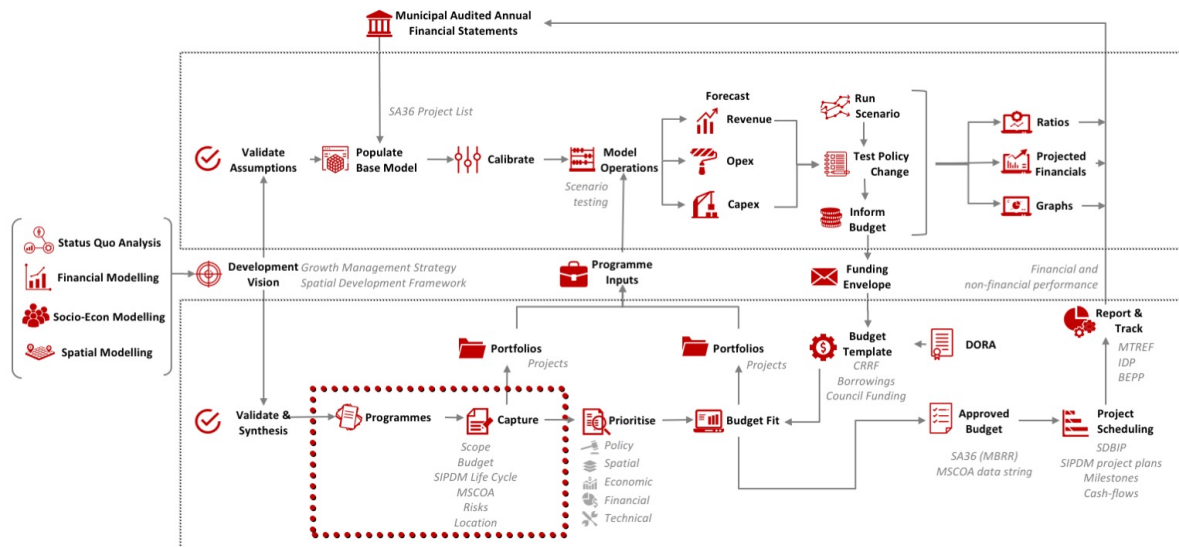


Figure 20: IIF in the context of the CEF

The Integrated Infrastructure Investment Framework (IIIF) outlines the demand identified of capital projects within the Stellenbosch Local Municipality jurisdiction. It represents all capital projects identified across various sectors by various departments on one platform. Stellenbosch Local Municipality has recognised the following three realities:

- Firstly, that Capital Expenditure projects not only originate and are implemented by the local municipality;
- Secondly, that it is the mandate of other bodies of government to provide services, specifically infrastructure related services; and
- Thirdly, that the IUDF calls for integrated planning and implementation.

Based on this above mentioned, Sol Plaatje aims to identify the total investment demand within the Stellenbosch Local Municipality jurisdiction. The IIIF therefore depicts not only projects captured on CP3, but also of other government entities. Once other government entities' data is on the Consolidated Inter-Governmental Project Pipeline Platform, Stellenbosch Local Municipality has the ability to incorporate such projects to the Integrated Infrastructure Investment Framework and so the Capital Expenditure Framework. This will unlock the ability to:

- Develop an integrated urban form as guided by the National Development Plan and the Integrated Urban Development Framework;
- Reduce wasteful expenditure and so optimise capital investment; and
- Collaboratively invest in the urban form by different bodies of government.

The institutional process that can deliver an Integrated Infrastructure Investment Framework require project specific information in order to consolidate the capital expenditure demand as identified by various bodies of government within the municipal jurisdiction. Each project should be adjoined with a set of minimum information to enable CP3 to appraise the readiness of a project for prioritisation – and is stored on a centralised database. This is important for a number of reasons:

- A centralised record of all capital needs can be backed up regularly assuring a measure of redundancy and independence on the knowledge of individuals within the various technical departments;
- The centralised data can be called upon by those that are involved in the appraisal of the relative importance of the respective projects and the subsequent budgeting and tracking of those project;
- It provides a collaborative space for departments to keep record of their needs and to lobby for an appropriate and responsive portion of the annual budget allocation;
- It also provides a platform where project commitments can be communicated to the municipality, and;
- It enables in year monitoring of capital project roll-out.

Project capturing allows for the logging of a new project even though that particular project may still be a mere wish. In other words, not enough detail of the project is known to be able to graduate the “candidate” project to a “graduate” project status. Importantly though, the project is recorded and as a result, recognised as a need by the planning authority.

The minimum information collected includes:

- mSCOA Project Segment;
- Project location;
- Project beneficiary / affected area;
- Project budget; and
- Alignment of project budgets with Organisational Objectives.

5.2 Capital expenditure planning: Process

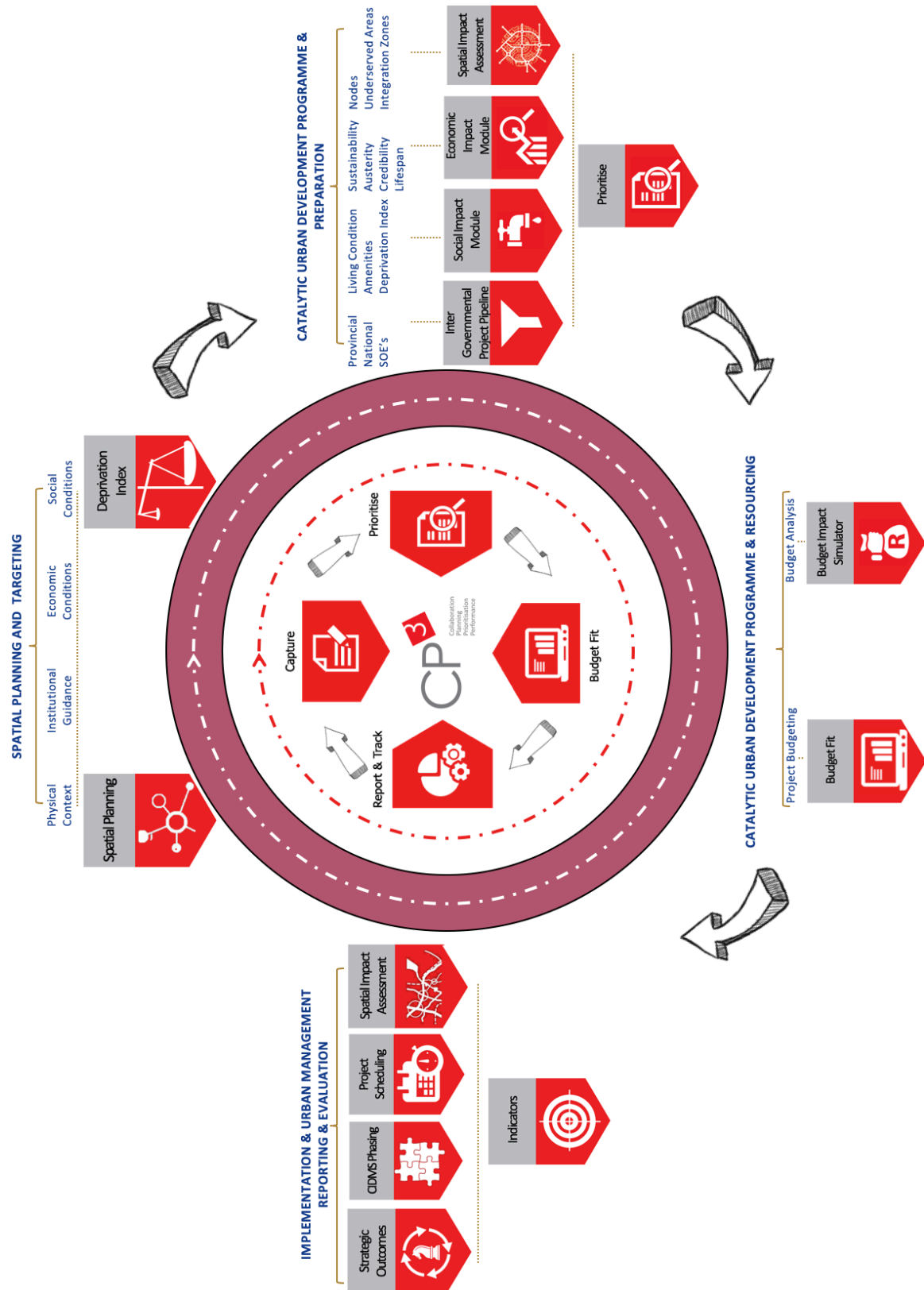


Figure 21: IGR collaboration

Figure 21 refers to the ideal process of capital expenditure planning, prioritisation, implementation and tracking. The first step towards initiating the process depicted in Figure 21 is to accumulate project specific information. This was done throughout the year by the whole municipality via the CP3 tool.

5.3 Inter-Governmental Project Pipeline

Several key role players has been identified in order to compile the inter-governmental project pipeline. This includes:

- Selected National Departments;
- Selected Provincial Departments, and;
- Selected SOE's.

Stellenbosch Local Municipality is working toward an inter-governmental project pipeline. To achieve this, the development of two additional prioritisation platforms are being developed, namely the Western Cape Collaboration Project Prioritisation and Performance platform as well as the National Government Collaboration Project Prioritisation and Performance platform of which the latter is already in place.

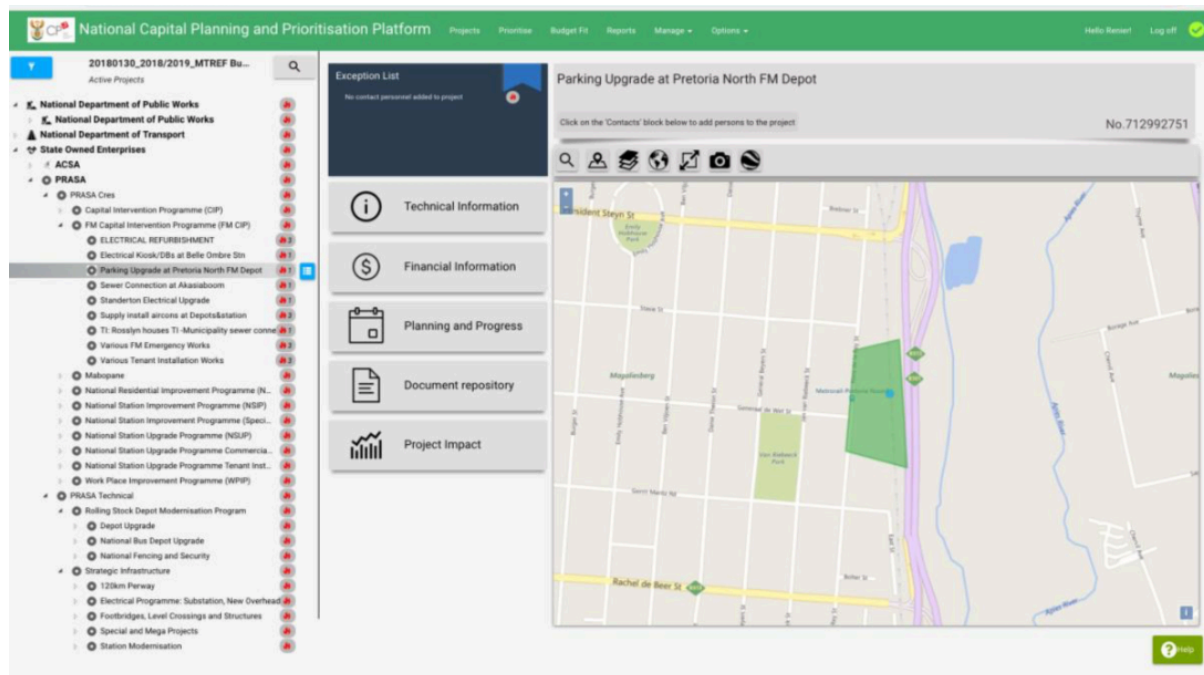


Figure 22: National Government capital Planning and Prioritisation Platform

Stellenbosch Local Municipality is awaiting information related to Capital projects from the government entities listed below. Following the receipt of this information, Stellenbosch will be in a position to populate the said platforms and so compile a comprehensive IIIF.

- Selected National Departments;
- Selected Provincial Departments, and;
- Selected SOE's.

The fact that these two platforms, together with Stellenbosch CP3 are essentially identical – it is possible to start with the first step of the Intergovernmental Project Pipeline process namely, to view the different entities of government planned intervention in space²⁷.

Once the platforms has been established, the second step will be to identify clear and obvious overlap or expenditure that is not in line with any other public entity's strategic vision or spatial targeting. Once these issues and opportunities has been identified, the various stakeholders and role players can use the same platform to coordinate and phase investment in a sustainable and efficient way which will lead to the most return on investment by the collaborative via the Capital Expenditure Framework.

Once such potentials have been identified and established, the CP3 platform will prioritize the investment opportunities, ranking projects based on the criteria engaged with by the Intergovernmental committee; such criteria will typically constitute of spatial, economic, social, technical and strategic qualities – each with a different weight – depending on the forum. The prioritized projects will then be sent through to the budget scenario process where the different entities' budget will be allocated to the prioritized projects in order to realize and give effect to spatial targeting. Throughout the process projects will be monitored as they are implemented.

5.4 Planned capital expenditure

The current capital expenditure project pipeline of the municipality includes the current planned capital expenditure for the financial year (2019/2020) up to financial year 2028/2029.

²⁷ The Stellenbosch jurisdictional area.

5.4.1 Planned capital expenditure: Summary

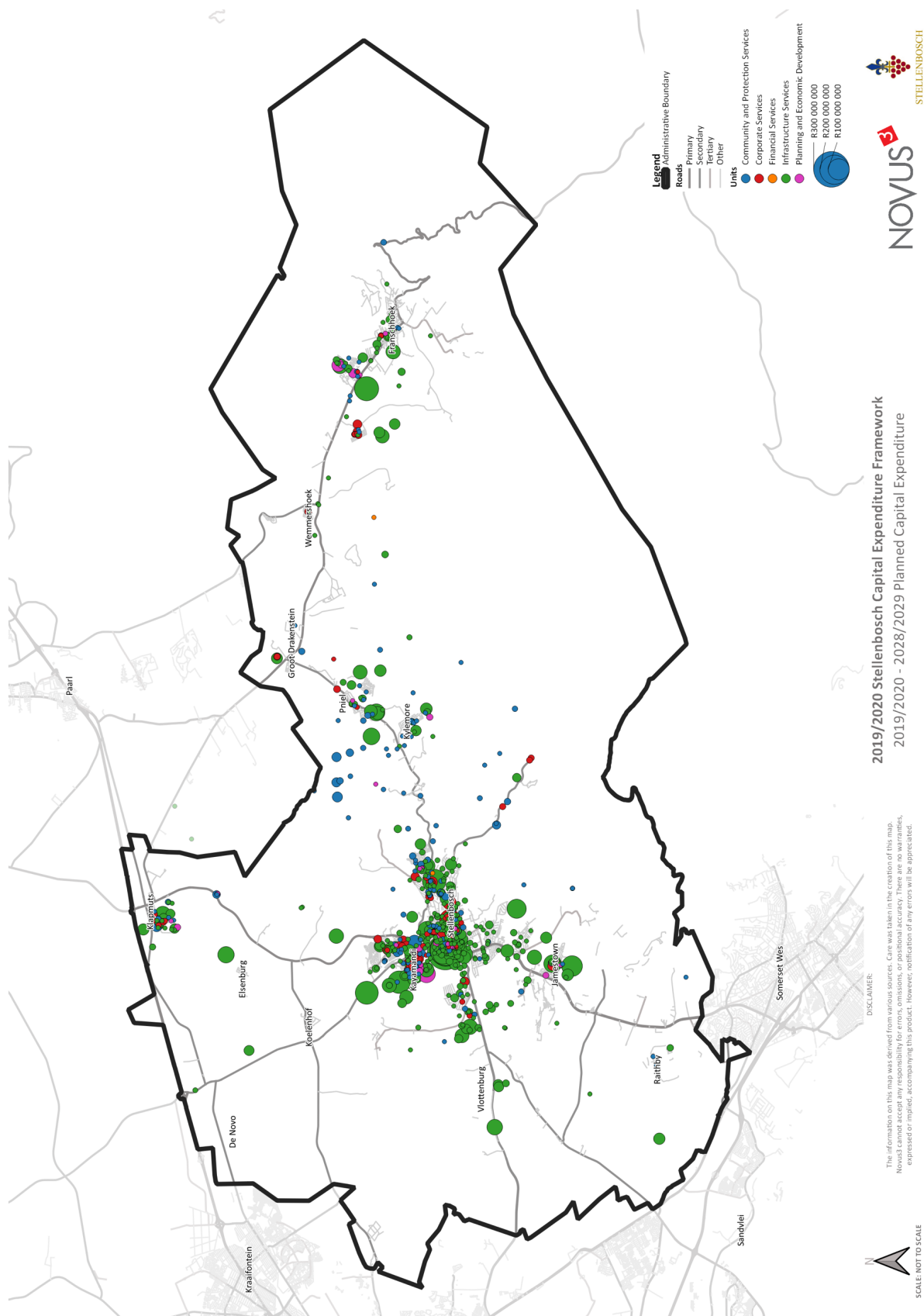
The traditional municipal process is based around a three year budget cycle as per the Medium Term Expenditure Framework (MTREF). This forced municipalities to plan in the same context. With the Introduction of the CEF, Stellenbosch first made an institutional change by planning on a five year horizon. Stellenbosch is working towards a thorough 10 year planning horizon, however several efforts needs to be made regarding the various sector plans before a mature 10 year planning perspective is formed.

It is important to note that the further one plans into the future, the more difficult it becomes to express a planned capital expenditure. It is for that reason that the total capital demand decrease as the years increase.

Table 56: 2019/2020-2030/2031 Planned capital expenditure

Year	Total Planned Capital Expenditure	Total Planned Capital Expenditure %
2019/2020	R1 155 145 272	20%
2020/2021	R959 878 659	17%
2021/2022	R740 192 900	13%
2022/2023	R740 017 754	13%
2023/2024	R433 019 619	8%
2024/2025	R458 314 256	8%
2025/2026	R393 318 130	7%
2026/2027	R419 737 630	7%
2027/2028	R245 045 909	4%
2028/2029	R198 933 462	3%
Total	R5 743 603 591	100%

From Table 56, it is clear that planned capital expenditure decrease as time increase, with almost 50% of the planned capital expenditure in the first three years. This is because the near future is more predictable than the distant future, which means that project managers has a better idea of what projects is required now, and what the actual capital expenditure would be of the said projects. The total planned capital expenditure amounts to R 5 743 603 591 during the ten year planning horizon.



Map 21: 2019/2020 – 2028/2029 Total planned capital expenditure

5.4.2 Planned capital per Unit

Table 57: Planned capital expenditure per unit per year

Year	Community and Protection Services	Corporate Services	Financial Services	Infrastructure Services	Municipal Manager	Planning and Economic Development	Grand Total
2019/2020	R115 619 000	R132 700 000	R150 000	R743 932 672	R35 000	R162 708 600	R1 155 145 272
2020/2021	R51 822 000	R78 770 000	R150 000	R690 770 959	R40 000	R138 325 700	R959 878 659
2021/2022	R35 775 000	R127 840 000	R150 000	R550 388 900	R40 000	R25 999 000	R740 192 900
2022/2023	R28 130 000	R111 640 000	R-	R572 197 754	R-	R28 050 000	R740 017 754
2023/2024	R22 795 000	R38 240 000	R-	R343 935 619	R-	R28 049 000	R433 019 619
2024/2025	R21 550 000	R18 440 000	R-	R404 274 756	R-	R14 049 500	R458 314 256
2025/2026	R18 290 000	R18 690 000	R-	R341 283 130	R-	R15 055 000	R393 318 130
2026/2027	R22 890 000	R15 740 000	R-	R367 052 630	R-	R14 055 000	R419 737 630
2027/2028	R9 790 001	R20 840 000	R-	R210 355 908	R-	R4 060 000	R245 045 909
2028/2029	R8 760 000	R64 040 000	R-	R122 133 462	R-	R4 000 000	R198 933 462
Total	R335 421 001	R626 940 000	R450 000	R4 346 325 790	R115 000	R434 351 800	R5 743 603 591
%	6%	11%	0%	76%	0%	8%	100%

Table 57 and Figure 24 shows planned capital expenditure per unit for each financial year. It is clear that Infrastructure services boasts more than 75% of the capital demand.

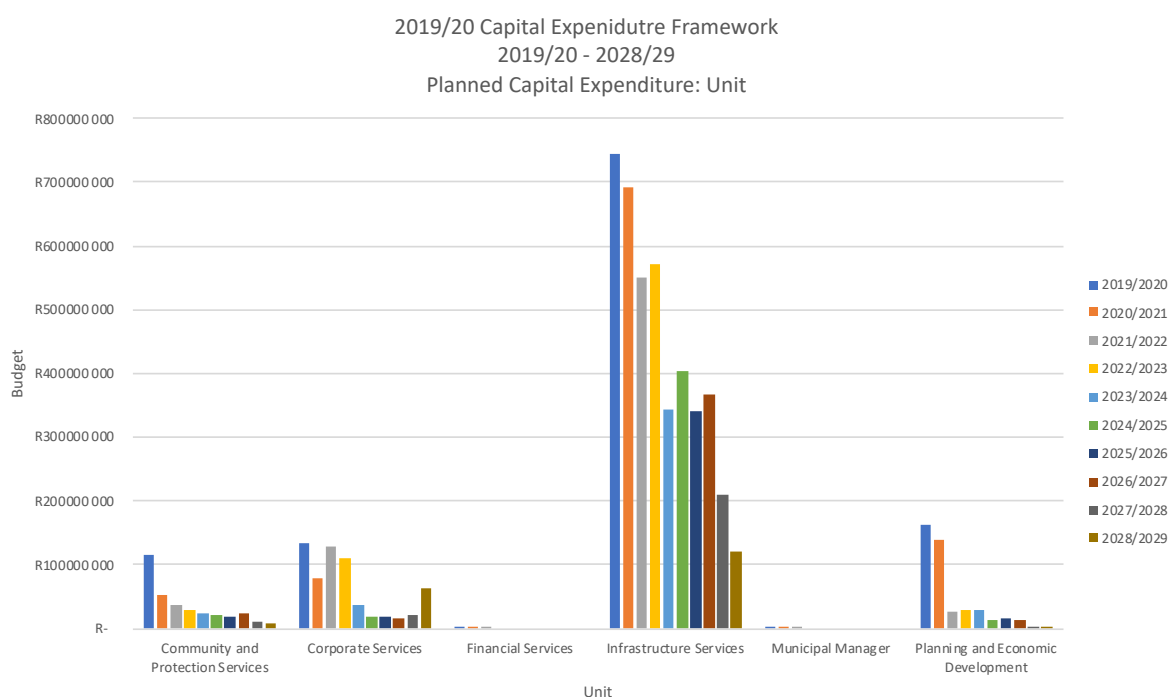


Figure 23: 2019/2020 – 2028/2029 Planned capital expenditure per unit

2019/20 Capital Expenditure Framework
 2019/20 - 2028/29
 Planned Capital Expenditure: Unit and Department

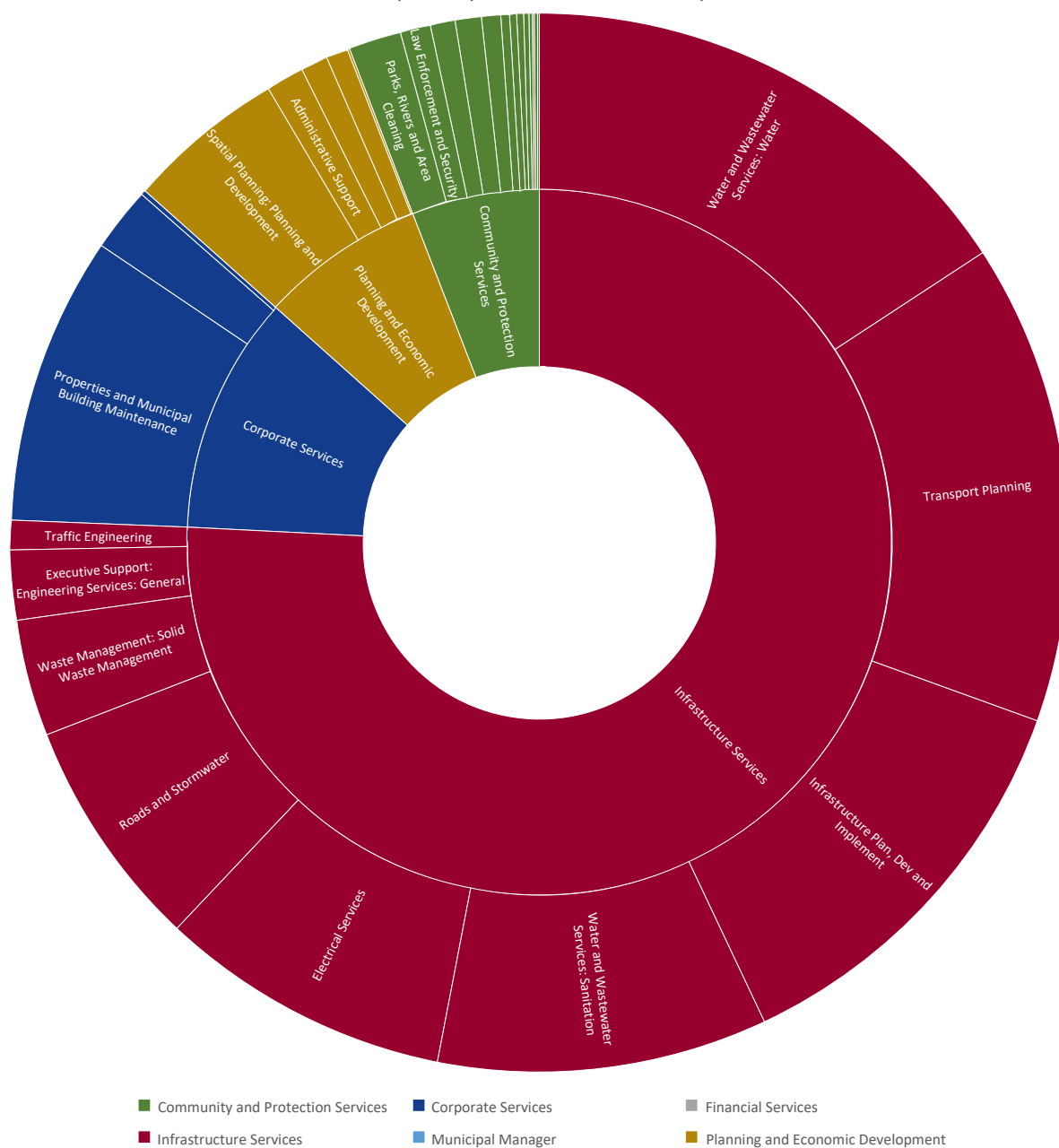


Figure 24: 2019/2020 – 2028/2029 Planned capital expenditure per unit and department

From Figure 24 it is clear that the infrastructure services unit requires, or rather plans, for the majority of the planned capital expenditure, amounting to +-75%, followed by corporate services and economic development – which are not surprising given that they are responsible for land acquisition (amongst others) in the municipality. One can also deduct the departmental split regarding planned capital expenditure. The department of Water and Wastewater Services: Water, together with Transport planning, represents almost 25% of the planned capital expenditure.

5.4.2.1 Planned Capital Expenditure: Infrastructure Services

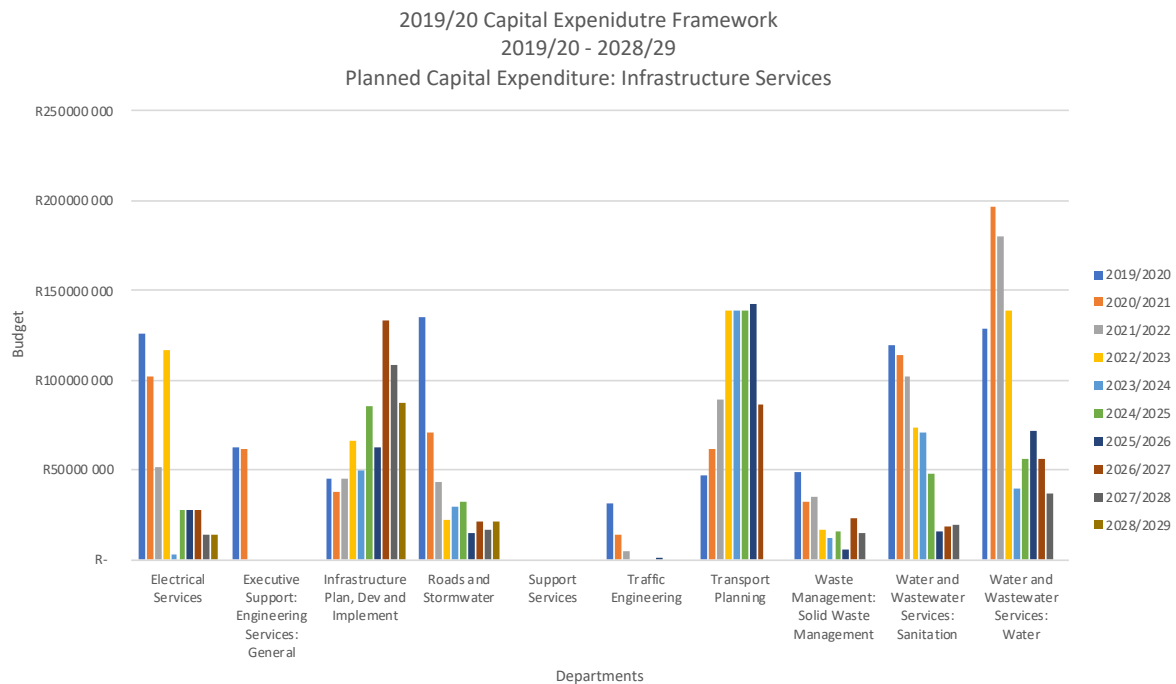


Figure 25: Ten Year planned capital expenditure: Infrastructure Services

Table 58: Ten Year planned capital expenditure: Infrastructure Services (R'000)

Year	Electrical Services	Executive Support: Engineering Services: General	Infrastructure Plan, Dev and Implement	Roads and Stormwater	Support Services	Traffic Engineering	Transport Planning	Waste Management: Solid Waste Management	Water and Wastewater Services: Sanitation	Water and Wastewater Services: Water	Grand Total
2019/2020	R125 866	R62 310	R44 852	R135 200	R-	R31 800	R46 570	R48 685	R119 800	R128 850	R 743 932 672
2020/2021	R101 700	R61 660	R37 797	R70 450	R-	R14 200	R61 785	R32 145	R114 034	R197 000	R 690 770 959
2021/2022	R51 150	R-	R44 894	R43 200	R-	R4 400	R89 550	R35 345	R101 600	R180 250	R 550 388 900
2022/2023	R116 300	R-	R66 443	R21 800	R-	R-	R138 660	R16 895	R73 450	R138 650	R 572 197 754
2023/2024	R3 000	R-	R49 511	R29 850	R-	R-	R138 660	R12 065	R70 950	R39 900	R 343 935 619
2024/2025	R28 000	R-	R85 415	R32 350	R-	R-	R138 660	R15 900	R47 550	R56 400	R 404 274 756
2025/2026	R28 000	R-	R62 273	R14 600	R-	R500	R142 160	R5 750	R16 050	R71 950	R 341 283 130
2026/2027	R28 000	R-	R133 483	R21 100	R-	R-	R86 820	R23 150	R18 300	R56 200	R 367 052 630
2027/2028	R14 000	R-	R108 506	R16 600	R-	R-	R-	R14 700	R19 350	R37 200	R 210 355 908
2028/2029	R14 000	R-	R87 033	R21 100	R-	R-	R-	R-	R-	R-	R 122 133 462
Total	R510 016	R123 970	R720 206	R406 250	R-	R50 900	R842 865	R204 635	R581 084	R906 400	R 4 346 325 790
Total %	12%	3%	17%	9%	0%	1%	19%	5%	13%	21%	100%

Of all the departments within the infrastructure services unit, transport planning boast 19% of the unit's planned capital expenditure. This is not only because of the important regional role transport planning has to deal with in the context of the Western Cape, but also because of the growing need of connectivity and easy access within the municipality. As a response to the water crisis within the municipality, and the region, the municipality is developing various water strategies that should be implemented. These initiatives, in other words, planned capital expenditure projects, amounts to 20% of the department's total planned capital expenditure, which is also the most for a department in the whole municipality.

5.4.2.2 Planned Capital Expenditure: Planning and Economic Development

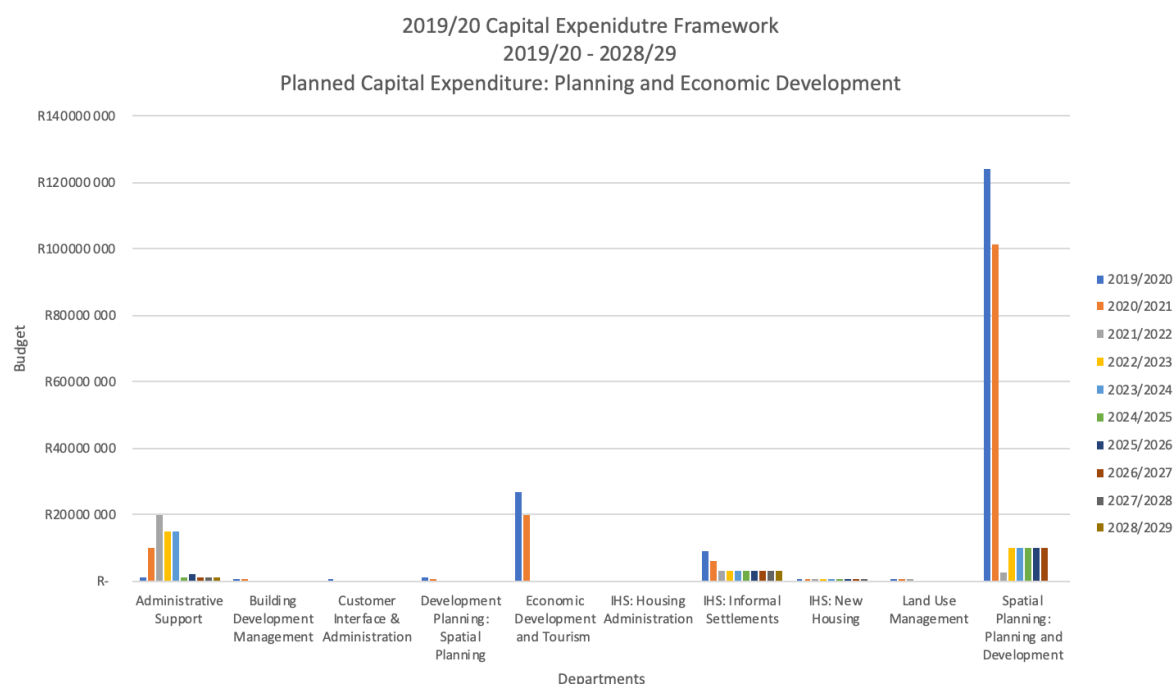


Figure 26: Ten Year planned capital expenditure: Planning and Economic Development

Table 59: Ten Year planned capital expenditure: P&E Development (R'000)

Unit	Administrative Support	Building Development Management	Customer Interface & Administration	Development Planning: Spatial Planning	Economic Development and Tourism	IHS: Housing Administration	IHS: Informal Settlements	IHS: New Housing	Land Use Management	Spatial Planning: Planning and Development	Grand Total
2019/2020	R1 000	R160	R100	R902	R26 670	R-	R9 020	R50	R585	R124 222	R162 709
2020/2021	R10 000	R35	R-	R800	R20 035	R-	R6 000	R52	R210	R101 194	R138 326
2021/2022	R20 000	R-	R-	R-	R-	R-	R3 020	R59	R125	R2 795	R25 999
2022/2023	R15 000	R-	R-	R-	R-	R-	R3 025	R25	R-	R10 000	R28 050
2023/2024	R15 000	R-	R-	R-	R-	R-	R3 025	R24	R-	R10 000	R28 049
2024/2025	R1 000	R-	R-	R-	R-	R-	R3 025	R25	R-	R10 000	R14 050
2025/2026	R2 000	R-	R-	R-	R-	R-	R3 030	R25	R-	R10 000	R15 055
2026/2027	R1 000	R-	R-	R-	R-	R-	R3 030	R25	R-	R10 000	R14 055
2027/2028	R1 000	R-	R-	R-	R-	R-	R3 030	R30	R-	R-	R4 060
2028/2029	R1 000	R-	R-	R-	R-	R-	R3 000	R-	R-	R-	R4 000
Total	R67 000	R195	R100	R1 702	R46 705	R-	R39 205	R314	R920	R278 211	R434 352
Total %	15%	0%	0%	0%	11%	0%	9%	0%	0%	64%	100%

The department Planning and Economic Development identified R434 352 000 planned capital expenditure which are reported under the said department. It must be noted that – specifically with respect to housing projects – some project might be conceptualised and even be administered within the department, however, another department in another unit might be the implementing agent.

5.4.2.3 Planned Capital Expenditure: Community and Protection Services

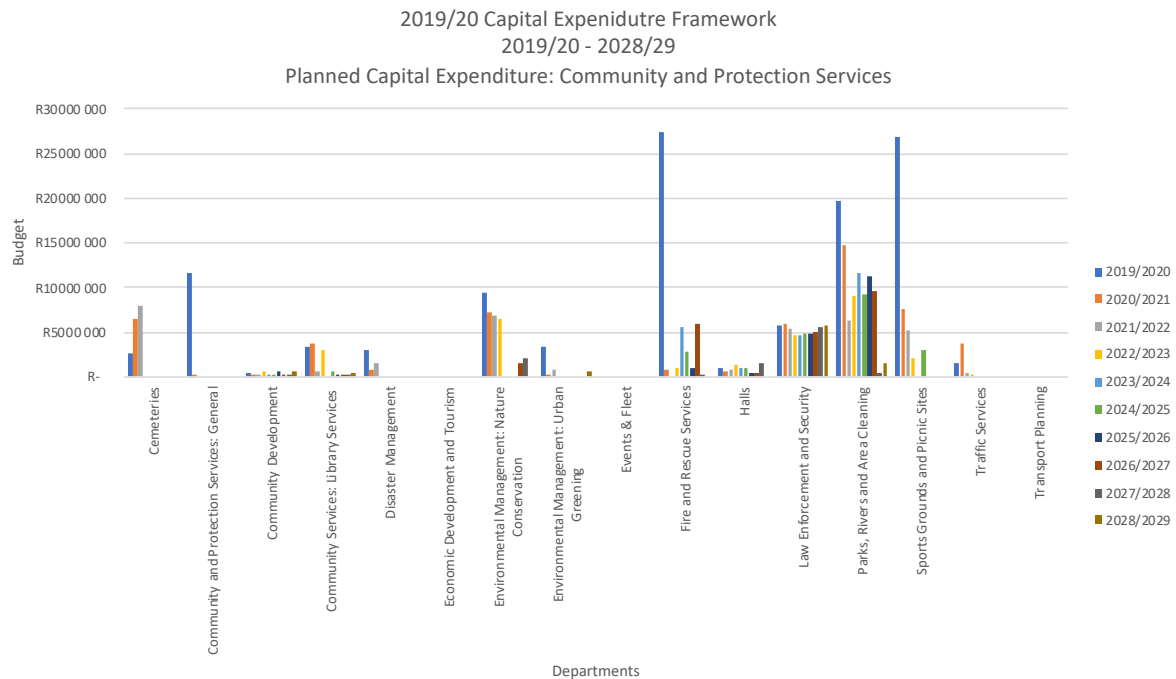


Figure 27: Ten Year planned capital expenditure: C & P Services Services

Table 60: Ten Year planned capital expenditure: C & P Services (R'000)

Year	Cemeteries	Community and Protection Services: General	Community Development	Community Services: Library Services	Disaster Management	Environmental Management: Nature Conservation	Environmental Management: Urban Greening	Fire and Rescue Services	Halls	Law Enforcement and Security	Parks, Rivers and Area Cleaning	Sports Grounds and Picnic Sites	Traffic Services	Grand Total
2019/2020	R2 700	R11 525	R385	R3 300	R2 900	R9 460	R3 285	R27 400	R900	R5 650	R19 650	R26 880	R1 584	R115 619
2020/2021	R6 500	R250	R142	R3 700	R800	R7 120	R150	R800	R600	R5 850	R14 730	R7 550	R3 630	R51 822
2021/2022	R8 000	R-	R100	R555	R1 500	R6 920	R700	R-	R700	R5 350	R6 260	R5 250	R440	R35 775
2022/2023	R-	R-	R560	R2 960	R-	R6 500	R-	R1 000	R1 300	R4 650	R9 120	R2 000	R40	R28 130
2023/2024	R-	R-	R55	R-	R-	R-	R-	R5 500	R1 000	R4 650	R11 590	R-	R-	R22 795
2024/2025	R-	R-	R60	R550	R-	R-	R-	R2 850	R1 000	R4 800	R9 290	R3 000	R-	R21 550
2025/2026	R-	R-	R550	R200	R-	R-	R-	R1 000	R500	R4 850	R11 190	R-	R-	R18 290
2026/2027	R-	R-	R50	R250	R-	R1 500	R-	R6 000	R500	R4 950	R9 640	R-	R-	R22 890
2027/2028	R-	R-	R60	R50	R-	R2 000	R-	R100	R1 500	R5 600	R480	R-	R-	R9 790
2028/2029	R-	R-	R570	R370	R-	R-	R680	R-	R-	R5 700	R1 440	R-	R-	R8 760
Total	R17 200	R11 775	R2 532	R11 935	R5 200	R33 500	R4 815	R44 650	R8 000	R52 050	R93 390	R44 680	R5 694	R335 421
Total %	5%	4%	1%	4%	2%	10%	1%	13%	2%	16%	28%	13%	2%	100%

Stellenbosch is well endowed with natural features. In order to maintain the character of the municipality, and to optimise on the natural assets within Stellenbosch, a department such as Parks, Rivers and Area Cleaning expresses the largest proportion of planned capital expenditure within this unit, amounting to almost 30% of this unit's planned capital expenditure.

5.4.2.4 Planned Capital Expenditure: Corporate Services

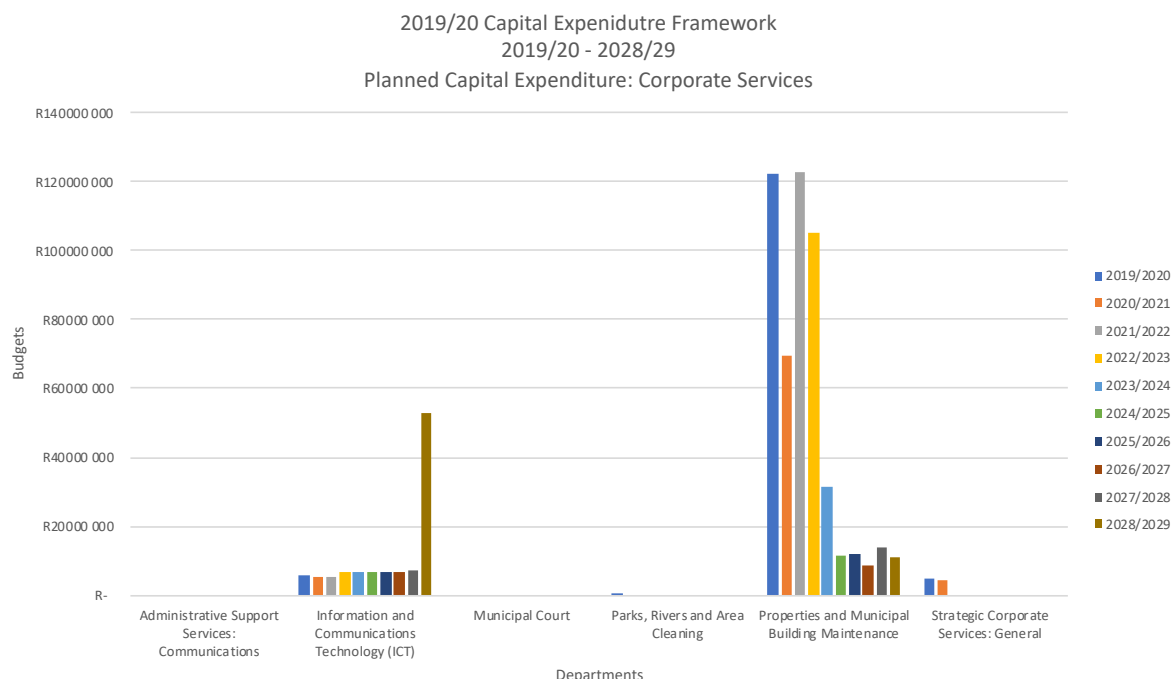


Figure 28: Ten Year planned capital expenditure: Corporate Services

Table 61: Ten Year planned capital expenditure: Corporate Services (R'000)

Year	Administrative Support Services: Communications	Information and Communications Technology (ICT)	Municipal Court	Parks, Rivers and Area Cleaning	Properties and Municipal Building Maintenance	Strategic Corporate Services: General	Grand Total
2019/2020	R-	R5 600	R-	R10	R122 270	R4 820	R132 700
2020/2021	R-	R5 100	R-	R-	R69 270	R4 400	R78 770
2021/2022	R-	R5 200	R-	R-	R122 640	R-	R127 840
2022/2023	R-	R6 600	R-	R-	R105 040	R-	R111 640
2023/2024	R-	R6 800	R-	R-	R31 440	R-	R38 240
2024/2025	R-	R6 800	R-	R-	R11 640	R-	R18 440
2025/2026	R-	R6 900	R-	R-	R11 790	R-	R18 690
2026/2027	R-	R6 900	R-	R-	R8 840	R-	R15 740
2027/2028	R-	R7 000	R-	R-	R13 840	R-	R20 840
2028/2029	R-	R53 000	R-	R-	R11 040	R-	R64 040
Total	R-	R109 900	R-	R10	R507 810	R9 220	R626 940
Total %	0%	18%	0%	0%	81%	1%	100%

Corporate services hosts 11% of the planned capital expenditure within the municipality, of which 81% are requested by the department of Properties and Municipal Building Maintenance – with a virtual similar amount of capital planned for in the first five year. The department of Information and Communications Technology (ICT) represents a further 18%. The mentioned departments thus foresee capital expenditure amounting to 99% of the unit.

5.5 Volume based demand

5.5.1 Capacity based demand versus Capital based demand

This section deals with the total Infrastructure demand within the Stellenbosch Local Municipality. As per the guidelines, it has expressed all capital demand in terms of budget requested and so answering the question of how much the total asset expenditure will cost. This enable financial modellers to determine what a sustainable path would be in terms of infrastructure roll out as well as the pace of implementation. However, at the core of the Capital Expenditure Framework is the aim to provide the desired urban form in an integrated manner – which means that capital demand should not only be viewed in monetary terms, but also in quantitative terms. The question that needs to be asked is therefore, how much units or how much capacity do we purchase with the identify demand within the Stellenbosch Local Municipality?

The first principles of economics dictate the relationship between quantity, price and demand. Without considering quantity, one does take the risk that not all demand is met over time.

5.5.2 Institutional processes in place to track capacity

Benchmarking of capital projects unit cost has been a difficult task throughout municipalities in South Africa. Not only because true project cost could never be measured accurately on a large scale, but also because actual expenditure and asset management has not been as sophisticated as one would hope. The Stellenbosch Local Municipality however, has the ability to amongst others, identify the volume that is being brought at a specific price.

5.6 Planned capital: Asset Action type demand

National Treasury has established a panel of service providers for the provision of an Integrated Financial Management and Internal Control System for local government. This is for municipalities to potentially procure financial management and internal control systems as they implement the Regulation of a Standard Chart of Accounts, commonly referred to as the Municipal Standard Chart of Accounts (mSCOA). mSCOA makes provision for a uniform and standardised financial transaction classification framework as per the Municipal Regulations and Standard Chart of Accounts as gazetted on 22 April 2014 (Gazette No 37577).

The Municipal Chart of Accounts is classified within the segments indicated in Figure 29 below:

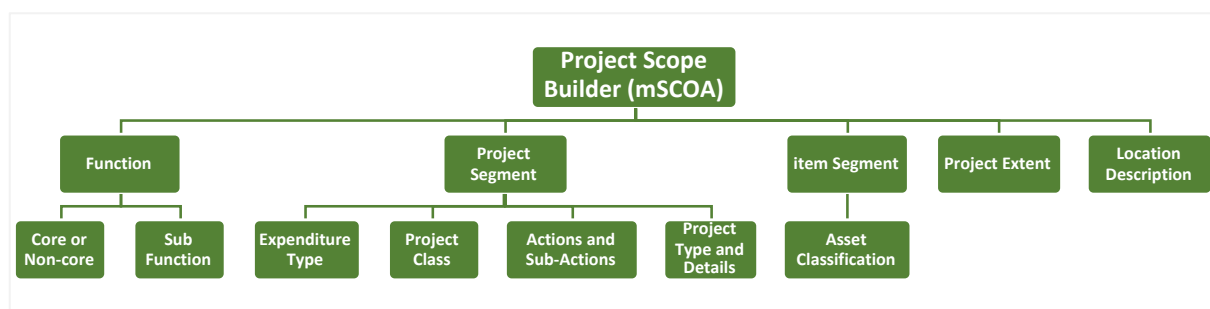


Figure 29: MSCOA segment classification

Within the Project Class, projects identified as “Infrastructure” are classified as “engineering type” services. These are inclusive of Electricity, Water and Sanitation as well as Roads and Storm-water type services. They display some or all of the following characteristics:

- Part of a system/ Network;
- Specific in nature and do not have alternative uses;
- Immovable, and;
- Subject to constraints at disposal.

Projects that fall under the “non- infrastructure” category are projects of a capital nature, identified by management. For example procurement of a new bus fleet for use as urban transport. Housing and Human Settlements also fall within the “non-infrastructure” category.

The project Action and Sub-Action component of the Project Segment within mSCOA, is an umbrella term that includes a “**New**” or “**Existing**” project. Sub-actions for an “**Existing**” project includes “**Upgrade**” or “**Renewal**”. For ease of reference the category descriptions are as follows:

- New: Capital projects to provide new assets to meet the current and future growth demands;
- Existing: Capital projects to provide an upgrade or renewal to asset in order to meet the current and future demands;
- Existing - Upgrade: Upgrade projects are generated according to the requirement for the replacement of a part of an asset component with the aim to increase the current capacity of the asset, and;
- Existing - Renewal: Replacing of existing infrastructure that has reached a Remaining Useful Life (RUL) of zero, while providing the same capacity and service.

Figure 30 and Table 62 indicate the asset type classification of the capital expenditure within the municipality.

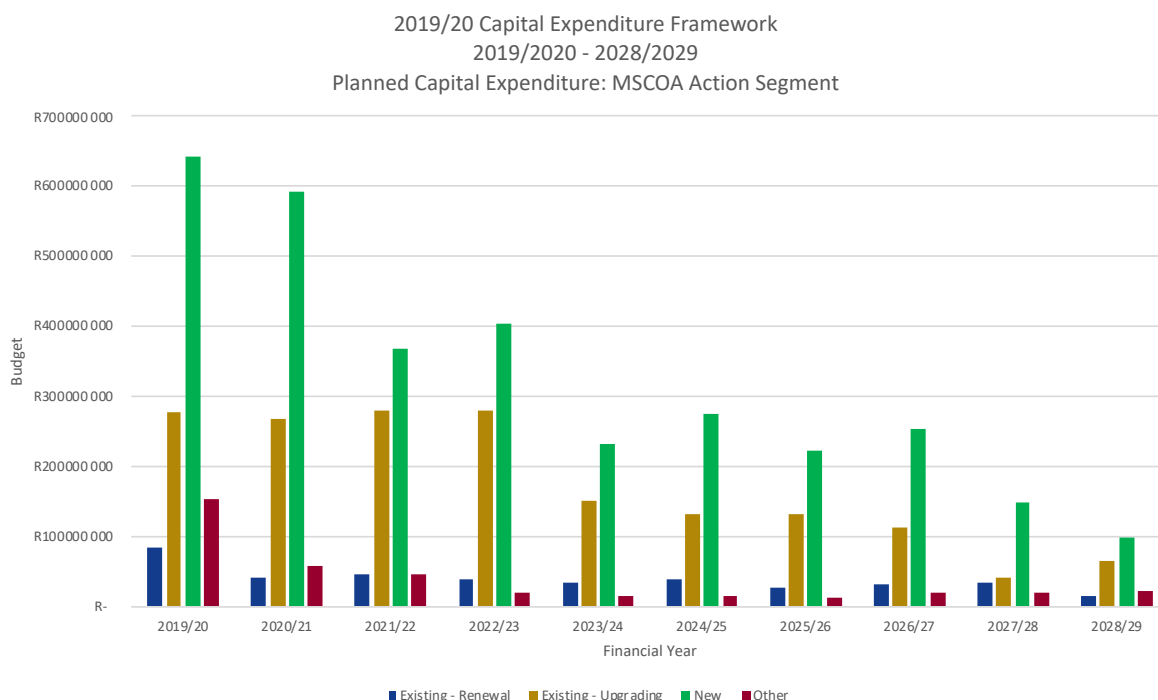


Figure 30: Planned capital expenditure per MSCOA action segment

Table 62: Planned capital expenditure per MSCOA action segment

Year	Existing - Renewal	Existing - Upgrading	New	Other	Total
2019/20	R84 240 000	R276 480 644	R641 594 528	R152 330 100	R1 154 645 272
2020/21	R40 180 000	R268 449 431	R593 258 528	R56 688 900	R958 576 859
2021/22	R45 250 000	R278 550 000	R369 028 900	R45 255 200	R738 084 100
2022/23	R38 550 000	R279 830 000	R402 792 754	R18 570 000	R739 742 754
2023/24	R34 650 000	R150 220 000	R232 085 619	R15 790 000	R432 745 619
2024/25	R37 700 000	R131 520 000	R274 179 756	R14 640 000	R458 039 756
2025/26	R27 200 000	R131 120 000	R221 333 130	R13 390 000	R393 043 130
2026/27	R32 200 000	R113 420 000	R254 302 630	R19 490 000	R419 412 630
2027/28	R34 250 000	R40 400 000	R148 535 909	R20 830 000	R244 015 909
2028/29	R14 900 000	R64 120 000	R98 193 462	R21 470 000	R198 683 462
Total	R389 120 000	R1 734 110 075	R3 235 305 216	R378 454 200	R5 736 989 491
%	7%	30%	56%	7%	100%

The proportion of New to Existing asset planned capital expenditure remains relatively constant throughout the ten year horizon. The majority of assets, in terms of planned capital expenditure, are related to New assets, followed by upgrading of existing assets of 30% of the planned capital expenditure during the analysis period. This shows that the municipality is aiming on increasing the rates-base, the capacity and the general size of the town, while still expanding the urban footprint of Stellenbosch.

5.7 Planned capital expenditure: Discipline based analysis

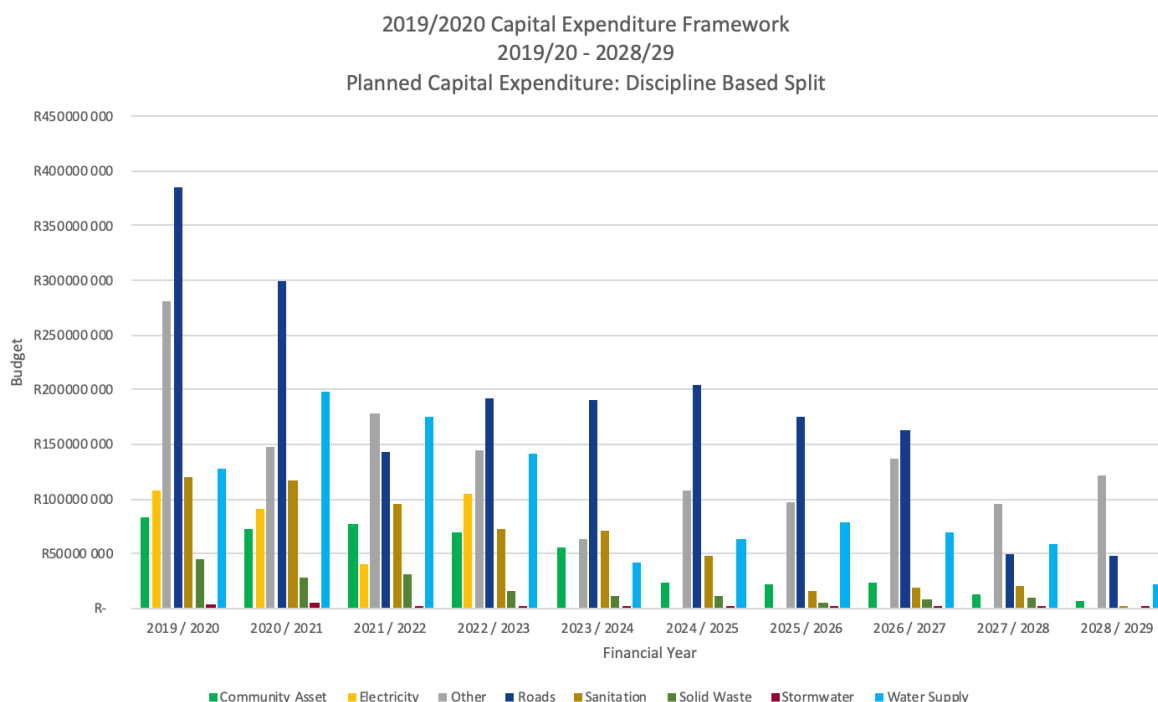


Figure 31: Planned capital expenditure per discipline

Table 63: Planned capital expenditure per discipline (R'000)

Year	Community Asset	Electricity	Other	Roads	Sanitation	Solid Waste	Stormwater	Water Supply	Total
2019 / 2020	83655	R108 356	R281 128	R385 805	R120 250	R44 900	R3 200	R127 852	R1 155 145
2020 / 2021	73165	R90 900	R147 913	R300 000	R116 334	R28 600	R4 200	R198 767	R959 879
2021 / 2022	77470	R40 300	R177 802	R143 340	R95 200	R31 000	R200	R174 881	R740 193
2022 / 2023	69860	R105 200	R143 860	R192 400	R72 500	R15 300	R100	R140 798	R740 018
2023 / 2024	56100	R-	R63 434	R190 320	R71 000	R10 500	R100	R41 566	R433 020
2024 / 2025	23950	R-	R107 825	R204 355	R47 800	R10 700	R100	R63 585	R458 314
2025 / 2026	21100	R-	R97 674	R175 240	R16 300	R4 300	R100	R78 605	R393 318
2026 / 2027	23100	R-	R136 073	R163 560	R18 550	R8 500	R100	R69 855	R419 738
2027 / 2028	12900	R-	R95 530	R49 240	R19 600	R9 300	R100	R58 376	R245 046
2028 / 2029	R6 970,0	R-	R121 975,0	R48 240,0	R250,0	R-	R100,0	R21 398,5	R198 933,5
Total	R448 270,0	R344 755,6	R1 373 212,8	R1 852 500,2	R577 784,4	R163 100,0	R8 300,0	R975 680,5	R5 743 603,6
Total %	8%	6%	24%	32%	10%	3%	0%	17%	100%

The discipline based analysis is a method of showing what types of assets will , or are planned for. From this one can deduct what the intent is of the municipality over the next ten years. Please note, this is only considering the sector plans and not necessarily the IDP needs of future years. Assets related to the Roads discipline as well as the Water discipline comprises of +-50% of the total 10 year planned capital expenditure. For detail related as to what assets relate to each discipline category, please refer to the section below.

5.8 Planned capital expenditure: Asset type analysis

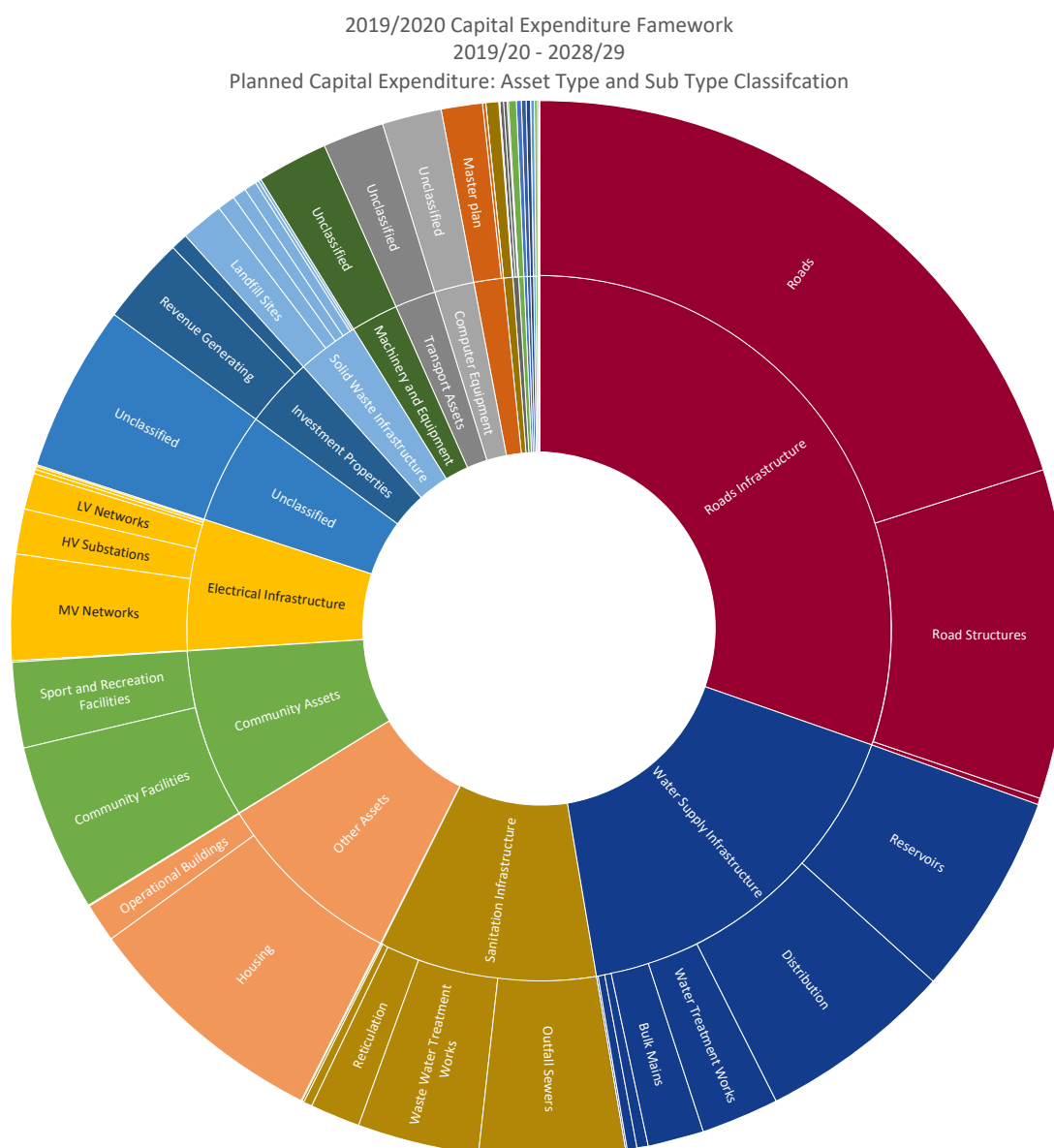


Figure 32: Planned capital expenditure – asset type and sub type classification

From the sunburst diagram it is clear that Roads infrastructure, Water Supply Infrastructure and Sanitation Infrastructure collectively represent 50% of the total planned capital expenditure of the municipality. Considering the process of developing the new deal as stated by the IUDF. It could be deducted that the majority of planning in terms of capital expenditure lends towards establishing new services followed by other services such as electrical infrastructure and community assets in future. Collectively, all of these services will result in integrated urban spaces as envisioned by the IUDF. For a detailed view of the asset types planned for, as part of the planned capital expenditure, please refer to the summary sheet below. It is important to take note of the following:

- Each project that are being planned for by the municipality are classified in terms of the latest mSCOA – namely version 6.3, and;
- Some asset type strings, or in other words, asset type classifications, does not go down to the same level of categorisation – hence the term “blank” on the sheet. This does not mean there is a lack of data, but rather a lack of a request or an option to capture more detail per project.

Table 33: Total planned capital expenditure per asset type captured on CP3

Type	Sub Type	Sum of 2019/20	Sum of 2020/21	Sum of 2021/22	Sum of 2022/23	Sum of 2023/24	Sum of 2024/25	Sum of 2025/26	Sum of 2026/27	Sum of 2027/28	Sum of 2028/29
Biological or Cultivated Assets	(blank)	R 2 350 000	R 1 100 000	R 750 000	R 1 350 000	R 1 400 000	R 550 000	R 450 000	R 600 000	R 100 000	R -
Community Assets	Community Facilities	R 49 255 000	R 59 365 000	R 68 420 000	R 51 660 000	R 37 900 000	R 2 750 000	R 2 900 000	R 4 900 000	R 12 700 000	R 6 770 000
Community Assets	Sport and Recreation Facilities	R 34 400 000	R 13 300 000	R 8 050 000	R 18 200 000	R 18 200 000	R 21 200 000	R 18 200 000	R 18 200 000	R 200 000	R 200 000
Community Assets	(blank)	R -	R 500 000	R 1 000 000	R -	R -	R -	R -	R -	R -	R -
Computer Equipment	(blank)	R 5 050 000	R 4 550 000	R 4 650 000	R 5 950 000	R 6 150 000	R 6 150 000	R 6 250 000	R 6 250 000	R 6 350 000	R 53 050 000
Electrical Infrastructure	Capital Spares	R 2 300 000	R 1 900 000	R 1 900 000	R 1 300 000	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	HV Substations	R 1 600 000	R 3 300 000	R 14 000 000	R 60 000 000	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	HV Switching Station	R -	R 1 000 000	R 1 000 000	R 1 000 000	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	LV Networks	R 30 875 644	R 23 600 000	R 7 600 000	R 1 500 000	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	MV Networks	R 73 580 000	R 55 600 000	R 15 800 000	R 41 400 000	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	MV Substations	R -	R 5 500 000	R -	R -	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	MV Switching Stations	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Electrical Infrastructure	Power Plants	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Expanded Public Works Programme	Project	R 500 000	R 500 000	R 500 000	R 500 000	R 550 000	R 550 000	R 600 000	R 800 000	R 800 000	R 800 000
Furniture and Office Equipment	(blank)	R 3 689 000	R 2 515 000	R 1 738 000	R 855 000	R 850 000	R 860 000	R 908 000	R 908 000	R 920 000	R 655 000
Heritage Assets	Conservation Areas	R 450 000	R -	R -	R -	R -	R -	R -	R -	R -	R -
Heritage Assets	Historic Buildings	R 800 000	R 5 200 000	R 200 000	R 200 000	R 200 000	R 200 000	R 200 000	R 200 000	R 200 000	R 200 000
Indigent and Cultural Management and Services	(blank)	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000
Information and Communication Infrastructure	Capital Spares	R 610 000	R 20 000	R 20 000	R 1 500 000	R -	R -	R 200 000	R -	R -	R -
Information and Communication Infrastructure	Core Layers	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Information and Communication Infrastructure	Data Centres	R 2 500 000	R 2 000 000	R 500 000	R 500 000	R 1 000 000	R -	R -	R -	R -	R -
Information and Communication Infrastructure	Distribution Layers	R 600 000	R 600 000	R 600 000	R 700 000	R 700 000	R 700 000	R 700 000	R 700 000	R 700 000	R -
Intangible Assets	Computer Software and Applications	R 3 820 000	R 3 100 000	R 1 700 000	R 2 000 000	R 2 000 000	R 2 300 000	R 2 500 000	R 2 500 000	R 2 500 000	R -
Intangible Assets	Licences and Rights	R 110 000	R 60 000	R -	R -	R -	R -	R -	R -	R -	R -
Intangible Assets	Unspecified	R 200 000	R 200 000	R 150 000	R 500 000	R -	R 500 000	R -	R -	R -	R -
Investment Properties	Non-revenue Generating	R 4 850 000	R 7 250 000	R 3 500 000	R 1 750 000	R 1 800 000	R 3 000 000	R 3 100 000	R 1 500 000	R 1 500 000	R 1 500 000
Investment Properties	Revenue Generating	R 12 400 000	R 7 800 000	R 66 500 000	R 67 500 000	R -	R -	R -	R -	R -	R -
Machinery and Equipment	(blank)	R 40 060 000	R 12 847 000	R 15 890 000	R 6 090 000	R 11 700 000	R 6 900 000	R 6 450 000	R 12 850 000	R 7 250 001	R 4 500 000
Meter Conversion and Replacement	(blank)	R 100 000	R -	R -	R -	R -	R -	R -	R -	R -	R -
Other Assets	Housing	R 29 960 000	R 21 060 000	R 25 190 000	R 35 520 000	R 19 670 000	R 68 750 000	R 57 080 000	R 85 250 000	R 53 550 000	R 39 750 000
Other Assets	Operational Buildings	R 24 119 000	R 24 700 000	R 13 550 000	R 600 000	R 500 000	R 700 000	R 2 300 000	R 500 000	R 600 000	R 600 000
Other Assets	(blank)	R 80 000	R 420 000	R -	R -	R -	R -	R -	R -	R -	R -
Roads Infrastructure	Road Furniture	R 6 150 000	R 3 050 000	R 700 000	R -	R -	R -	R -	R -	R -	R -
Roads Infrastructure	Road Structures	R 90 625 000	R 52 200 000	R 25 850 000	R 92 340 000	R 92 340 000	R 92 340 000	R 92 340 000	R 40 500 000	R -	R -
Roads Infrastructure	Roads	R 261 995 000	R 231 335 000	R 101 050 000	R 92 520 000	R 95 070 000	R 101 275 200	R 79 060 000	R 106 320 000	R 41 500 000	R 46 500 000
Sanitation Infrastructure	Capital Spares	R 200 000	R 200 000	R 250 000	R 250 000	R 250 000	R 300 000	R 300 000	R 300 000	R 350 000	R -
Sanitation Infrastructure	Outfall Sewers	R 55 000 000	R 36 000 000	R 22 000 000	R 19 000 000	R 44 000 000	R 34 000 000	R 14 000 000	R 16 000 000	R 17 000 000	R -
Sanitation Infrastructure	Pump Station	R 1 000 000	R 1 000 000	R 1 000 000	R 1 500 000	R 1 500 000	R 3 250 000	R 1 750 000	R 2 000 000	R 2 000 000	R -
Sanitation Infrastructure	Reticulation	R 17 500 000	R 17 500 000	R 18 500 000	R 6 000 000	R 20 000 000	R 10 000 000	R -	R -	R -	R -
Sanitation Infrastructure	Toilet Facilities	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000	R 250 000
Sanitation Infrastructure	Waste Water Treatment Works	R 46 300 000	R 61 384 431	R 53 200 000	R 45 500 000	R 5 000 000	R -	R -	R -	R -	R -
Solid Waste Infrastructure	Capital Spares	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Solid Waste Infrastructure	Electricity Generation Facilities	R 500 000	R 3 500 000	R 1 500 000	R 10 300 000	R 1 500 000	R 1 000 000	R 300 000	R 1 200 000	R 1 700 000	R -
Solid Waste Infrastructure	Landfill Sites	R 25 500 000	R 10 000 000	R 17 000 000	R 2 000 000	R 5 000 000	R 2 000 000	R 1 500 000	R 6 000 000	R 6 200 000	R -
Solid Waste Infrastructure	Waste Drop-off Points	R 10 400 000	R 5 100 000	R 2 500 000	R 500 000	R 3 000 000	R 7 000 000	R 2 000 000	R 300 000	R 400 000	R -
Solid Waste Infrastructure	Waste Processing Facilities	R 6 000 000	R -	R -	R -	R -	R -	R -	R -	R -	R -
Solid Waste Infrastructure	Waste Separation Facilities	R 1 000 000	R -	R -	R 500 000	R 1 000 000	R 500 000	R 500 000	R 500 000	R 1 000 000	R -
Solid Waste Infrastructure	Waste Transfer Stations	R 1 500 000	R 10 000 000	R 10 000 000	R 2 000 000	R -	R 200 000	R -	R 500 000	R -	R -
Spatial Planning	(blank)	R 3 047 600	R 1 258 900	R 1 545 200	R -	R -	R -	R -	R -	R -	R -
Storm water Infrastructure	Attenuation	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Storm water Infrastructure	Drainage Collection	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Storm water Infrastructure	Storm water Conveyance	R 3 200 000	R 4 200 000	R 200 000	R 100 000	R 100 000	R 100 000	R 100 000	R 100 000	R 100 000	R 100 000
Strategic Management and Governance	Administrative Strategy and Planning	R 100 000	R 100 000	R -	R -	R -	R -	R -	R -	R -	R -
Strategic Management and Governance	Feasibility Studies	R 2 500 000	R 3 000 000	R 200 000	R -	R -	R -	R -	R -	R -	R -
Strategic Management and Governance	Master plan	R 23 410 000	R 13 750 000	R 10 300 000	R 6 700 000	R 2 200 000	R 2 700 000	R 5 700 000	R 2 200 000	R 3 200 000	R 2 200 000
Strategic Management and Governance	Plan Development	R -	R -	R -	R -	R -	R -	R -	R -	R -	R -
Transport Assets	(blank)	R 27 035 000	R 13 415 000	R 15 740 000	R 7 540 000	R 2 910 000	R 10 740 000	R 3 840 000	R 16 740 000	R 7 740 000	R 1 740 000
Water Supply Infrastructure	Boreholes	R 900 000	R 550 000	R 550 000	R -	R -	R -	R -	R -	R -	R -
Water Supply Infrastructure	Bulk Mains	R 17 451 528	R 36 451 528	R 30 000 000	R 15 000 000	R -	R -	R -	R -	R -	R -
Water Supply Infrastructure	Capital Spares	R -	R -	R 300 000	R -	R -	R -	R -	R -	R -	R -
Water Supply Infrastructure	Dams and Weirs	R 1 000 000	R 1 000 000	R 2 000 000	R 2 000 000	R 2 000 000	R 2 000 000	R 3 000 000	R 5 000 000	R -	R -
Water Supply Infrastructure	Distribution	R 17 500 000	R 23 265 000	R 69 780 900	R 97 297 754	R 24 315 619	R 17 834 556	R 31 854 630	R 38 354 630	R 23 375 908	R 398 462
Water Supply Infrastructure	Pump Station	R 6 000 000	R 12 000 000	R -	R -	R -	R -	R -	R -	R -	R -
Water Supply Infrastructure	Reservoirs	R 82 000 000	R 113 000 000	R 42 000 000	R 8 500 000	R 9 000 000	R 14 500 000	R 14 500 000	R 22 000 000	R 30 500 000	R 21 000 000
Water Supply Infrastructure	Water Treatment Works	R 3 000 000	R 12 500 000	R 30 250 000	R 18 000 000	R 6 250 000	R 29 250 000	R 29 250 000	R 4 500 000	R 4 500 000	R -
(blank)	(blank)	R 119 572 500	R 35 631 800	R 30 068 800	R 11 395 000	R 14 464 000	R 13 714 500	R 10 985 500	R 21 565 000	R 17 610 000	R 18 470 000

Section 6 Long Term Financial Strategy



6 Long Term Financial Strategy

6.1 Contextualisation

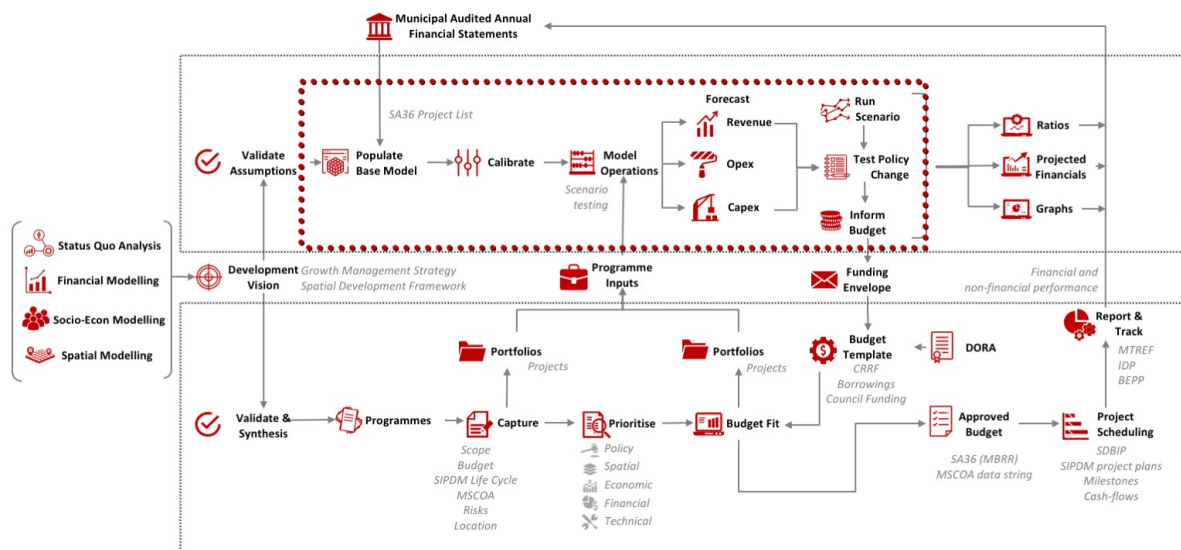


Figure 34: Long Term Financial Strategy in the context of the CEF

The objective of a Long-Term Financial Plan Strategy is to recommend strategies and policies that will maximise the probability of the municipality's financial sustainability into the future. This is achieved by forecasting future cash flows and affordable capital expenditure based on the municipality's historic performance and the environment in which it operates.

The main outcome of the Long-Term Financial Strategy, for the purposes of this report, is to determine the affordable future capital expenditure and proposed capital funding mix (affordability envelope) of the municipality over the next 10 years.

The forecast 10-year Affordability Envelope and proposed Capital Funding Mix is presented in Chapter 7.

6.2 Financial model high-level outline

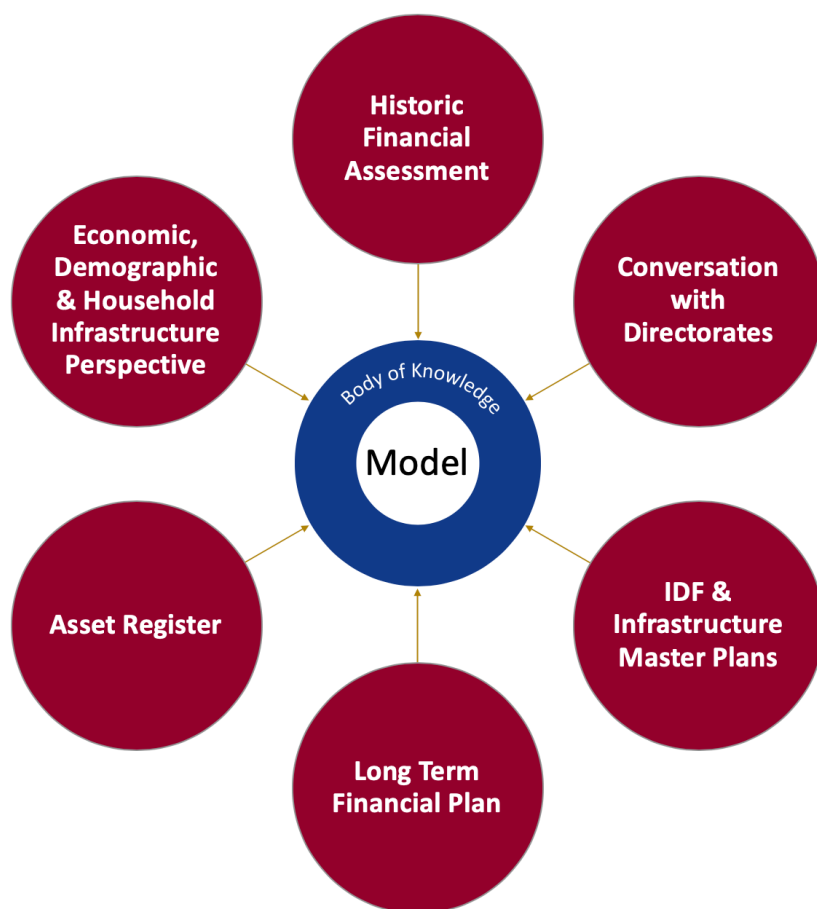


Figure 35: Financial Model Process

In forecasting the affordability envelope it is important to consider the four sources of capital funding available to the municipality, being:

- Capital grants from the fiscus, informed and affected by the National budget and macro-economic environment;
 - Capital contributions by developers;
 - Optimal and affordable external borrowings, informed by an analysis against financial sustainability parameters and ratios, including gearing levels, liquidity levels and the debt servicing capacity of the municipality; and
 - Own cash resources of the municipality, from either cash-backed capital replacement reserves or annual residual cash generated by the municipality.
- To recommend the most optimal funding mix between external borrowings and own cash resources, it is important to forecast the cash generated by the municipality (net cash for the year) in each of the next 10 years by considering the difference between:
- inflows from revenue (a function of quantity and price) and applying a reasonable collection rate and inflation expectations; and

- outflows of cash to staff and suppliers in the form of operating expenses of the municipality.

The net cash should first and foremost be utilised for servicing of existing loans and funding of cash backed reserves. Any free cash flow remaining after this would be available to service new debt, with the residual cash being utilised as part of own cash resources funding capital expenditure. These principles are depicted in the figure below.

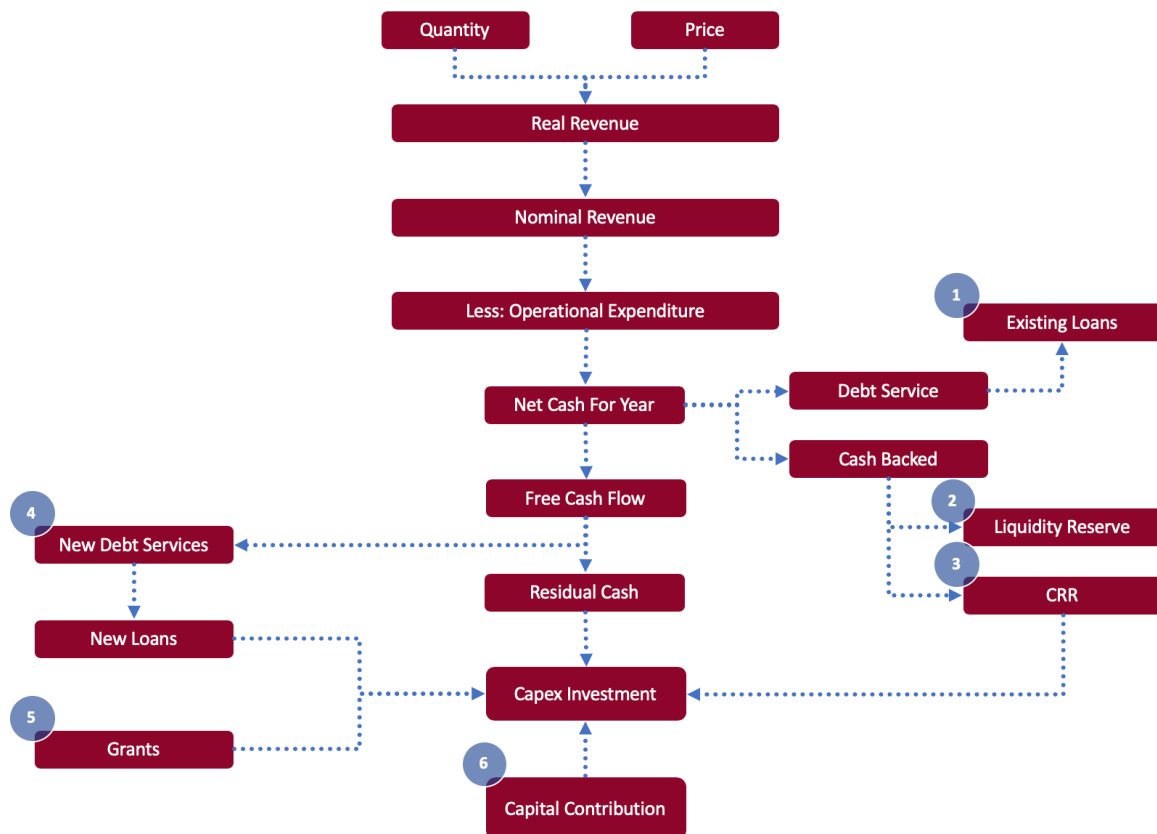


Figure 36: Financial model Input

6.2.1 Financial Model High Level Outline

The long term financial model used for this section of the Capital Expenditure Framework originated from National Treasury's Cities Support Program²⁸. It is populated with the latest information of Stellenbosch Local Municipality and is used to make a base case financial forecast. The figure below illustrates the outline of the model.

The model was adapted for the purpose of this update in that no large infrastructure projects has yet been assessed. Once the capital prioritisation exercise has been completed, we shall include selected projects to determine the impact on the long-term financial position of the municipality. For now, the capital budget as presented in the MTREF was included and used to forecast an affordable future capex programme.

²⁸ Part of National Treasury's Cities Support Programme and with technical assistance from the World Bank Group.

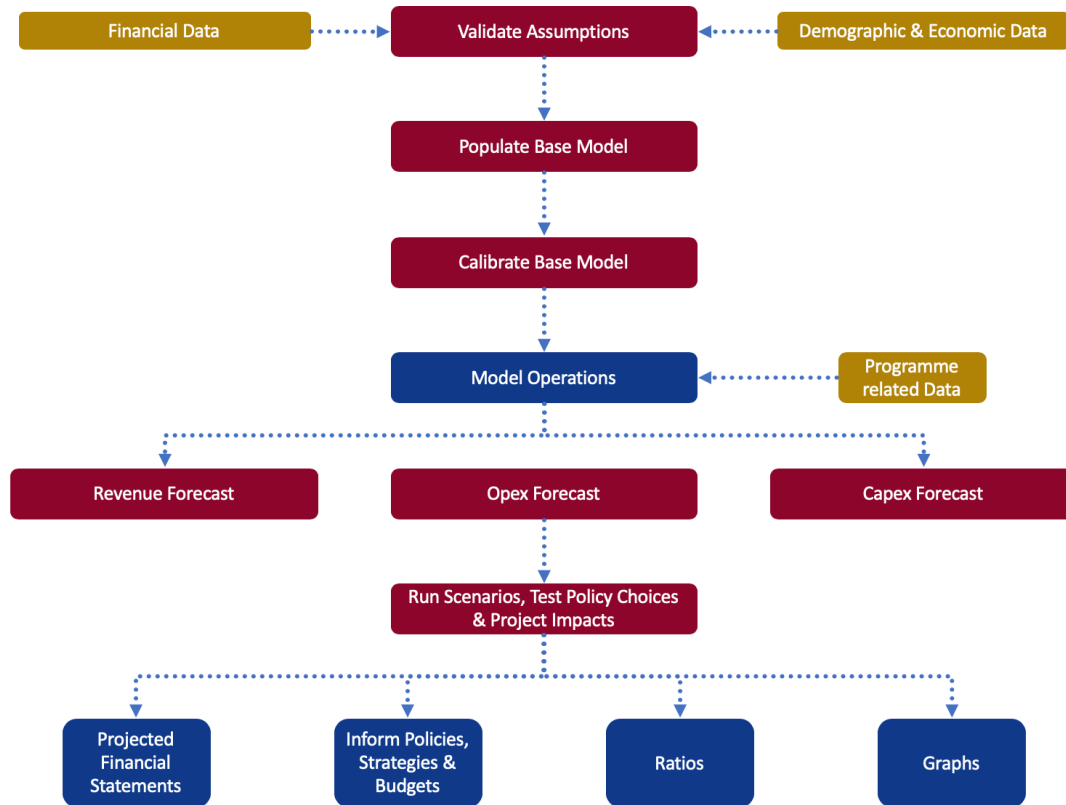


Figure 37: Financial model high level outline

6.2.2 Financial Model Detailed Elements

As a basis, the Long Term Financial Model relies on the input of reliable data and reasonable assumptions. The data utilised and key assumptions in the model are mainly informed by an independent financial assessment, which entails:

- a historic demographic-, economic- and household infrastructure perspective, which was based on the latest available information as published by IHS Global Insight;
- a historic financial analysis updated with the information captured in the municipality's audited annual financial statements of 30 June 2018;
- the 2018/19 to 2020/21 MTREF budget and associated worksheets data; and
- information gathered from market research, other strategic documents of the municipality (including the IDP, master plans etc), from experienced gained in the sector and other relevant sources.

The outcomes of the independent financial assessment and the key assumptions made are discussed in more detail below.

6.3 Updated Historic Financial Assessment

6.3.1 Financial Position

The financial position of Stellenbosch remained positive throughout the 8 years of assessment. As at 30 June 2018, Stellenbosch's balance sheet reflected Total Asset position of R 6.07 billion, increasing from R 3.81 billion at the end of the 2011 financial year.

Stellenbosch's low gearing ratio of 11% and a positive debt coverage ratio (cash generated from operations/debt service) of 8.49 indicate that long term interest bearing liabilities levels are contained. Total interest-bearing liabilities was R 173.30 million at the end of 2018, increasing from R 41.54 million in 2010/11.

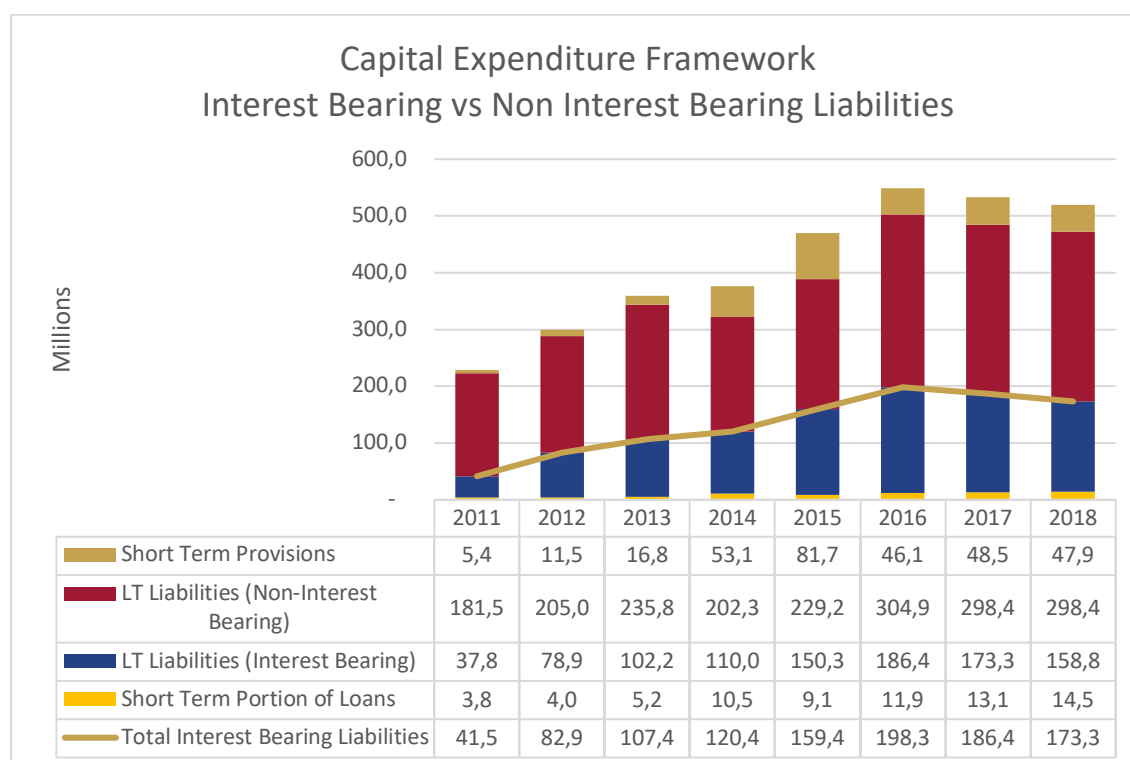


Figure 38: Interest Bearing vs Non Interest Bearing Liabilities

6.3.1.1 Current Liabilities

Current Liabilities peaked at R 445.84 million in 2017 decreasing slightly to R 420.65 million in 2018. This was due to a decrease in creditors of R41.11 million (14.6%) to R240.98 million at the end of the 2018 financial year, which represents 57.3% of current liabilities.

Of concern is the increase in unspent conditional grants, especially in the last two financial periods. Unspent Conditional grants increased to R 101.60 million at in 2018, which is an area the municipality is actively managing.

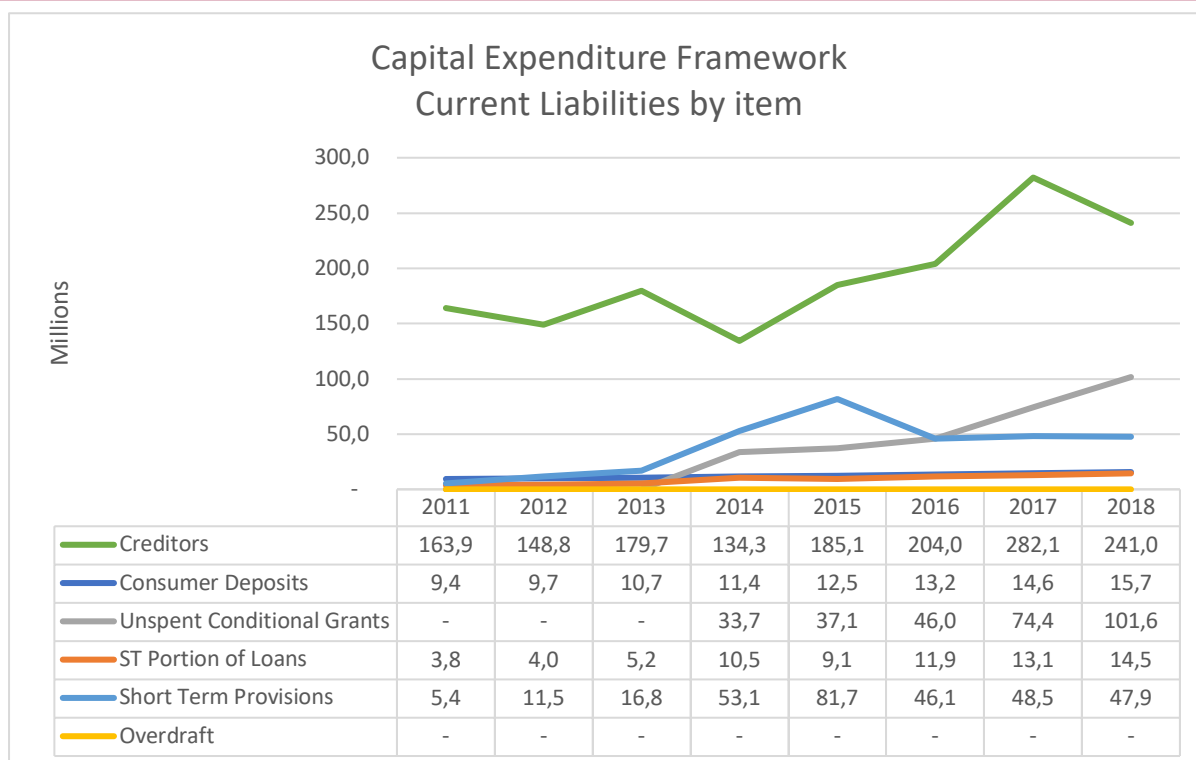


Figure 39: Current Liabilities by item

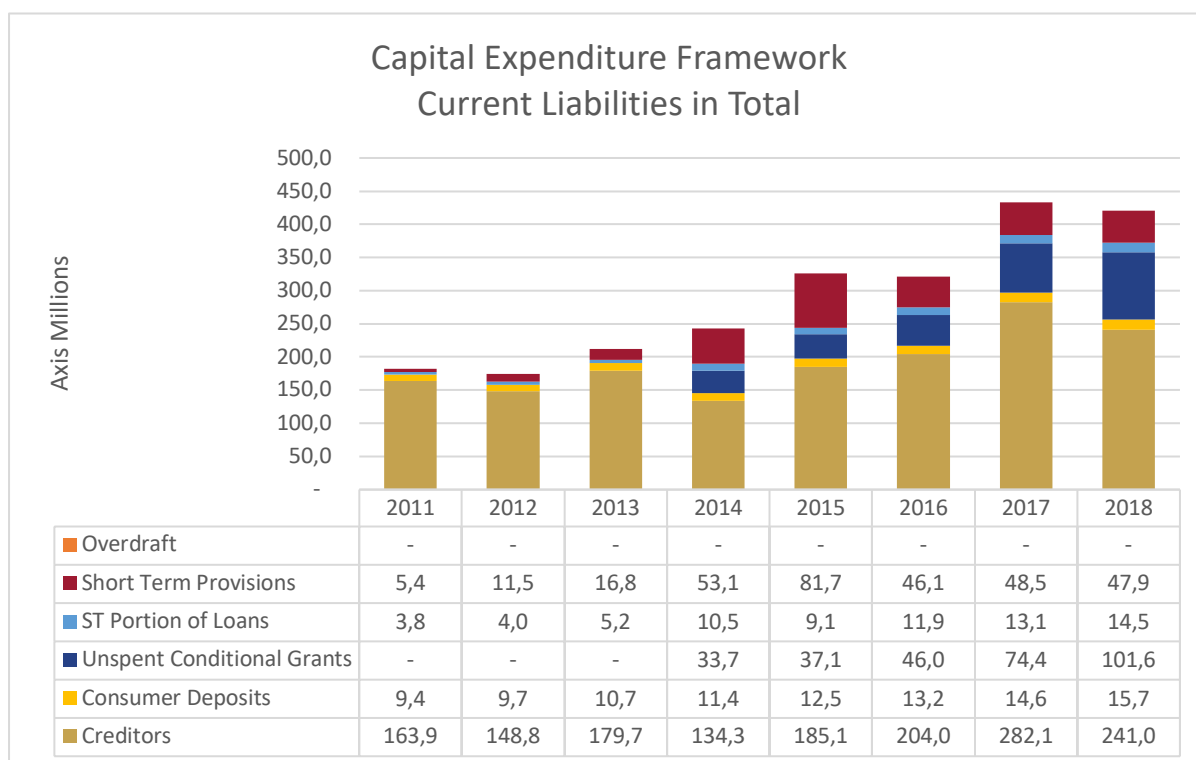


Figure 40: Current Liabilities in Total

6.3.1.2 *Current Assets*

Current Assets increased annually throughout the period, except for a 3% decline to a balance of R 920.73 million in 2018. Total Current Assets are mainly represented (57.4%) by Cash and cash equivalents, Consumer debtors (26.8%), Other Debtors (4.8%), and inventories (5.1%).

The sharp increase in consumer debtors between 2016 and 2017 relates to reclassification of accrued income on water debtors from other debtors to consumer debtors. The subsequent increase in 2018 is cause for concern, specifically in light of the decrease in cash and cash equivalents between 2016 and 2018.

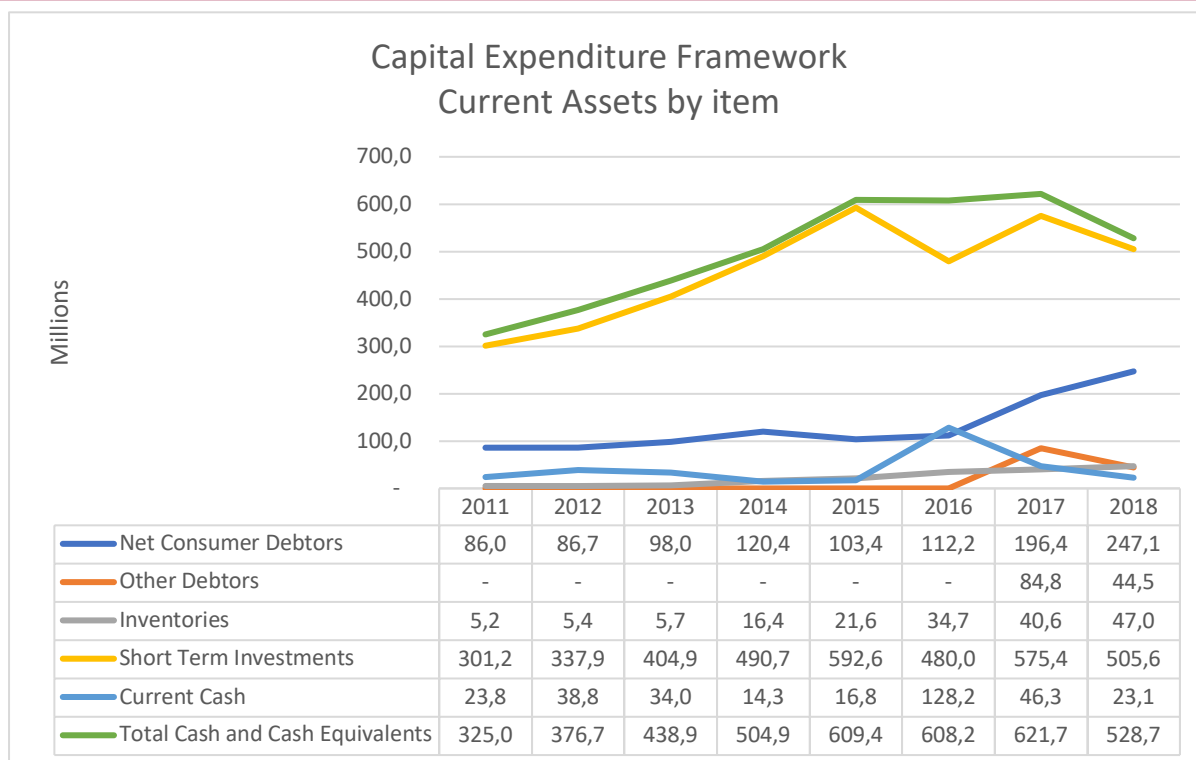


Figure 41: Current Assets by item

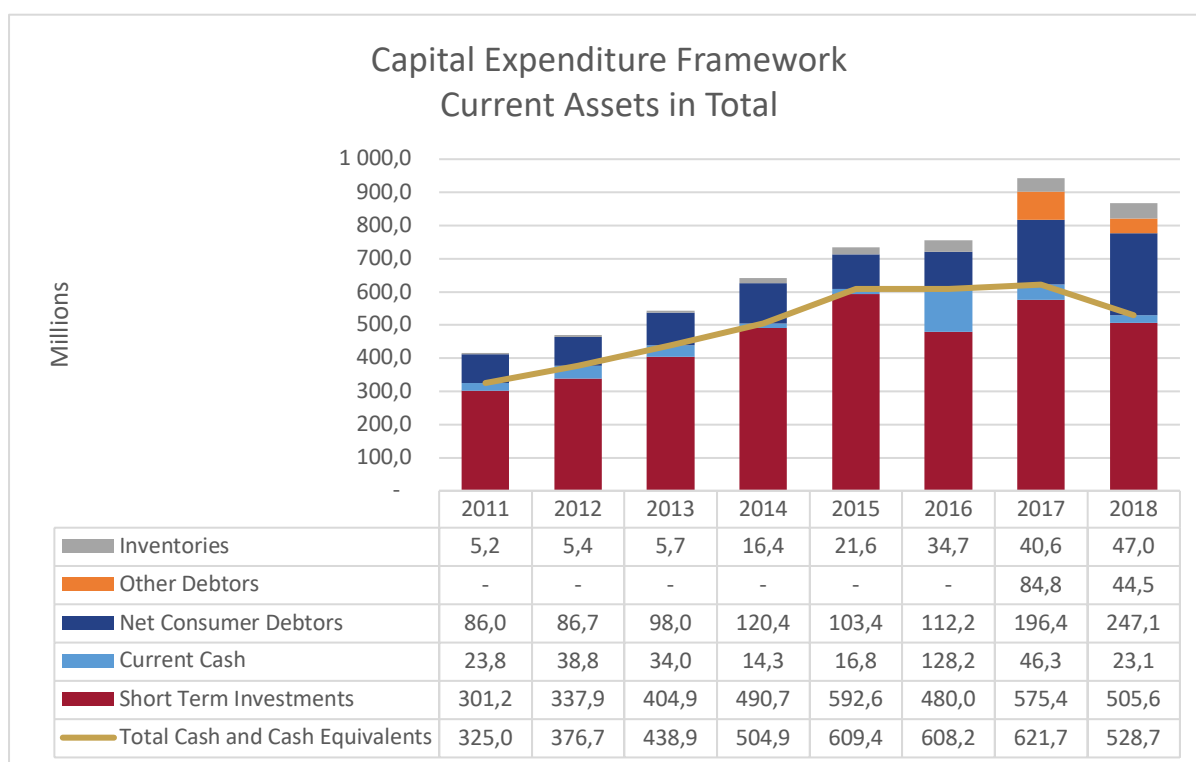


Figure 42: Current Assets in Total

6.3.1.3 Liquidity Ratio

The healthy liquidity position of 2.19:1 as at the end of 2018 is consistent with the 2017 trend. The ratio remains strong at 2.01:1 when debtors older than 30 days are excluded.

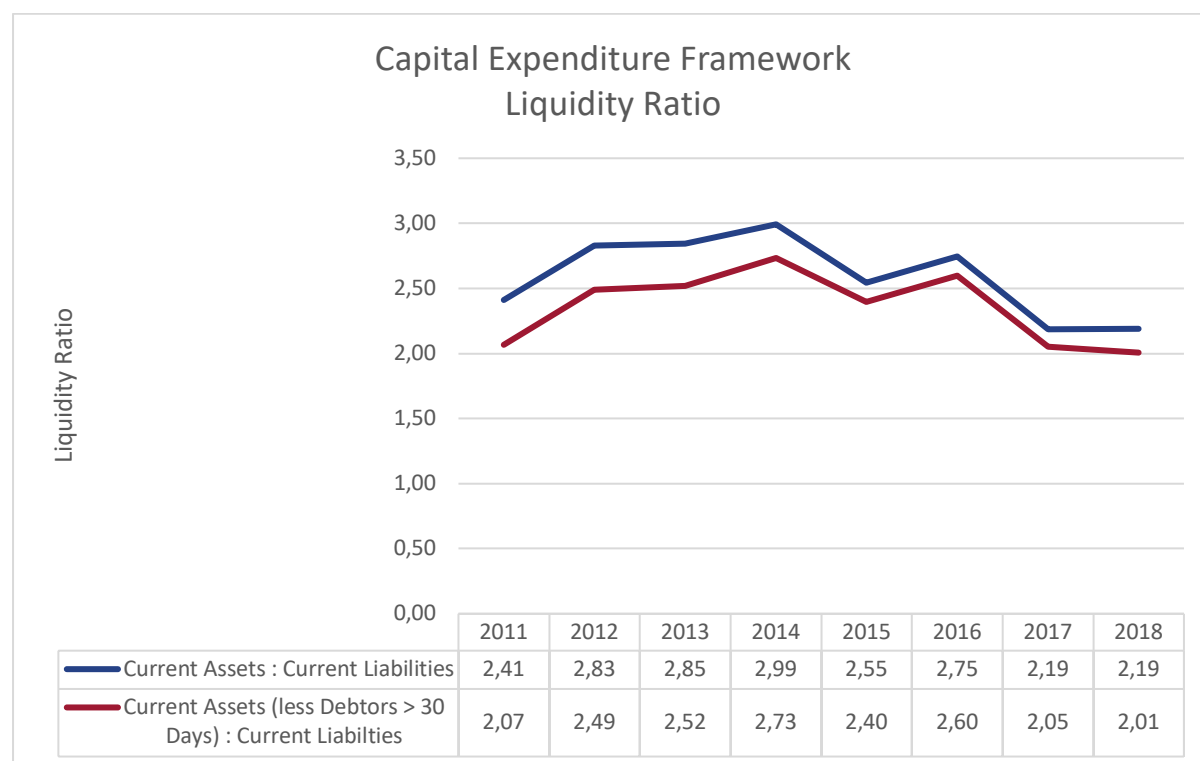


Figure 43: Liquidity Ratio

6.3.1.4 Net Consumer Debtors

Net Consumer Debtors increased to R 247.11 million in 2018, due to growth in gross consumer debtors, while the provision for doubtful debts decreased to R 65.2 million.

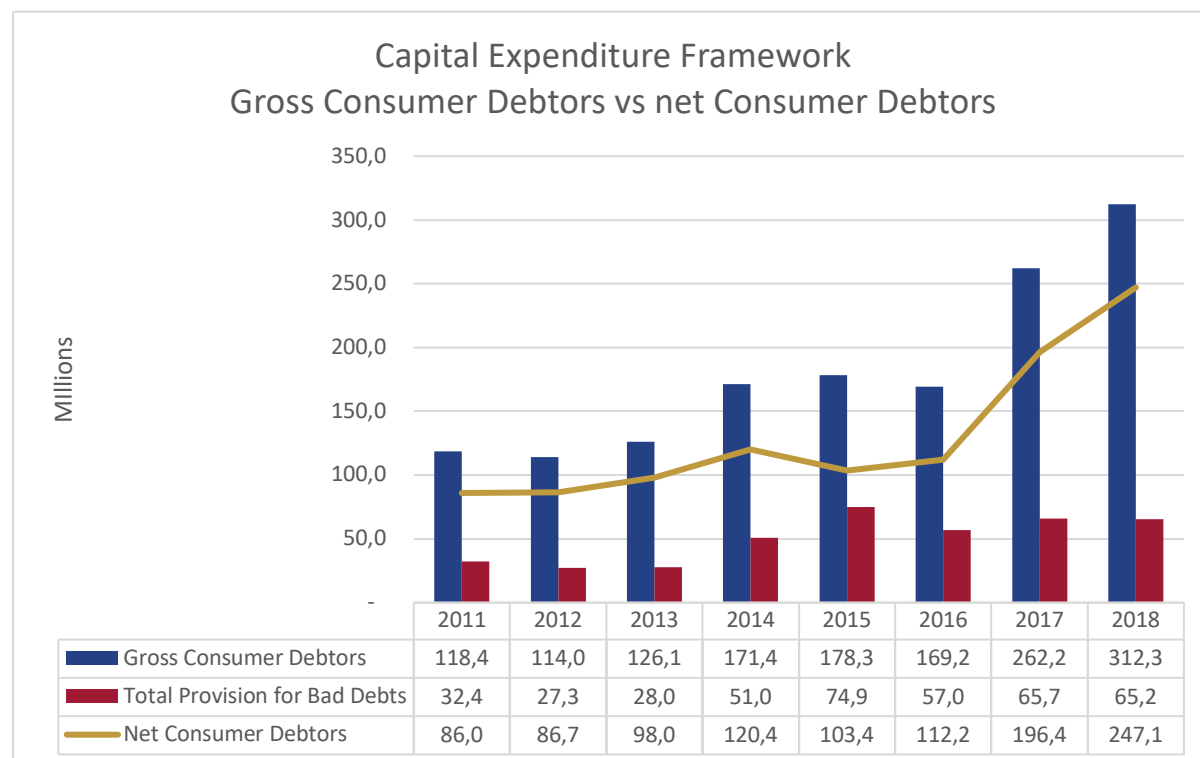


Figure 44: Gross Consumer Debtors vs net Consumer Debtors

6.3.1.5 Debtors Age Profile

The Debtors Age Profile indicates 42% of Gross Consumer Debtors being older than 90 days. The provision does not sufficiently cover debtors older than 90 days as prescribed by National Treasury. Current debtors represent 55% of the debtors book.

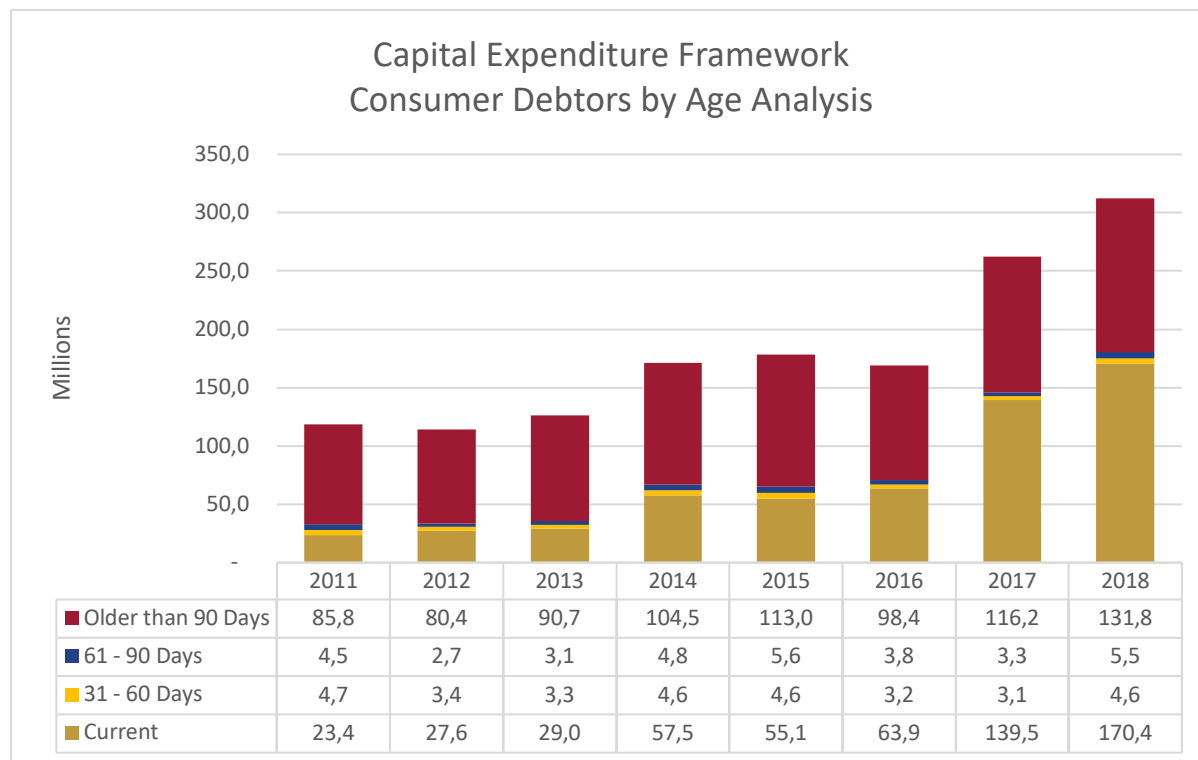


Figure 45: Consumer Debtors by Age Analysis

6.3.1.6 Consumer Debtors by type

Electricity and Water Debtors increased sharply in 2017 and 2018 and currently represents the majority (70%) of total outstanding net consumer debtors. This raises a concern that tariff increases may be unaffordable to the Stellenbosch community. Rates Debtors remained fairly stable, representing 13.2% of consumer debtors. The collection ratio averaged 96% during the assessment period and was in most years above the minimum acceptable benchmark of 95%. As disclosed in the AFS, the municipality implemented higher water tariffs because of persistent drought conditions experienced in the province. This is be the main factor behind the significant annual increase in water debtors. The higher tariffs are in line with approved tariffs, designed to limit water usage whilst the low water supply conditions persists.

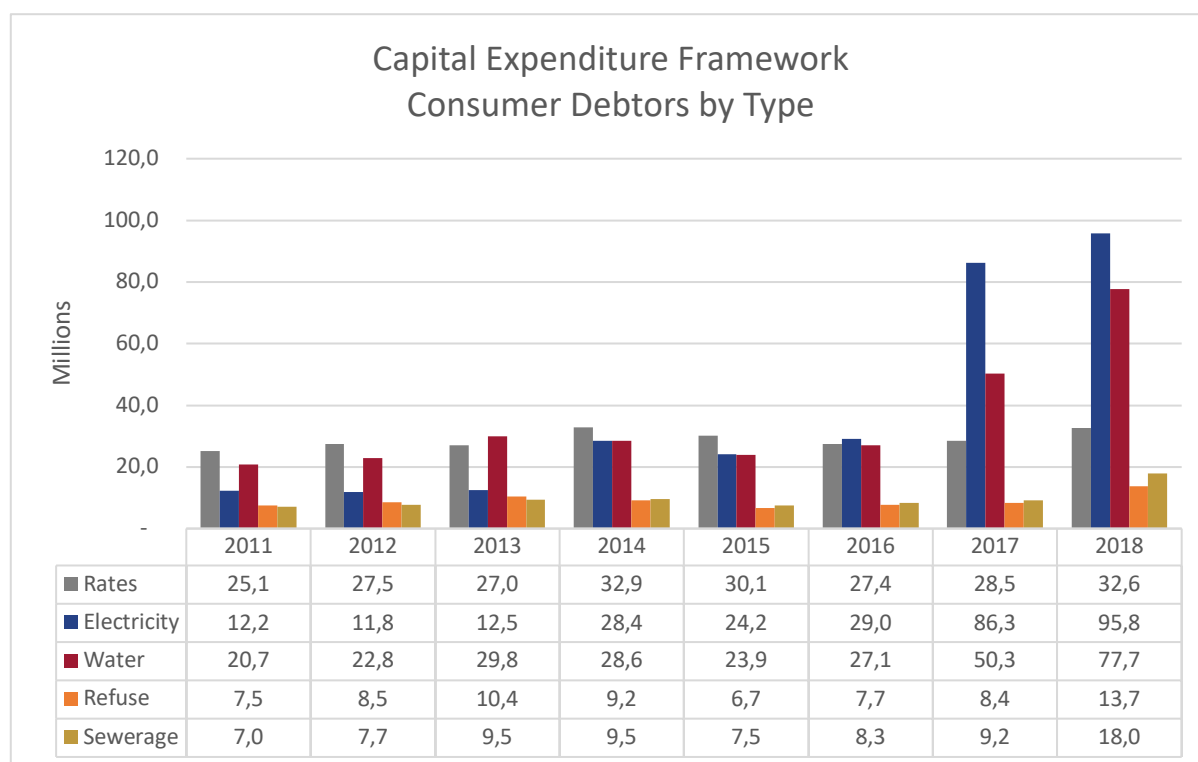


Figure 46: Consumer Debtors by Type

6.3.2 Financial Performance

Stellenbosch realised an Accounting Surplus of R 263.58 million in 2018, increasing from R 70.28 million at the end of the 2011 financial year. This accounting surplus was mainly driven by a significant increase in total income of R 800.17 million (98.8%), against an increase in total operating expenditure of R 606.08 million (83.33%).

When capital grants are excluded from total income, the municipality remained in a position to generate Total Operating Surpluses increasing from R 47.78 million in FY2016 to R 186.10 million in 2018.

Cash Generated from Operations (excl. capital grants) reached its highest value of R 270.47 million at in 2018 from the lowest of R 148.08 million in 2011.

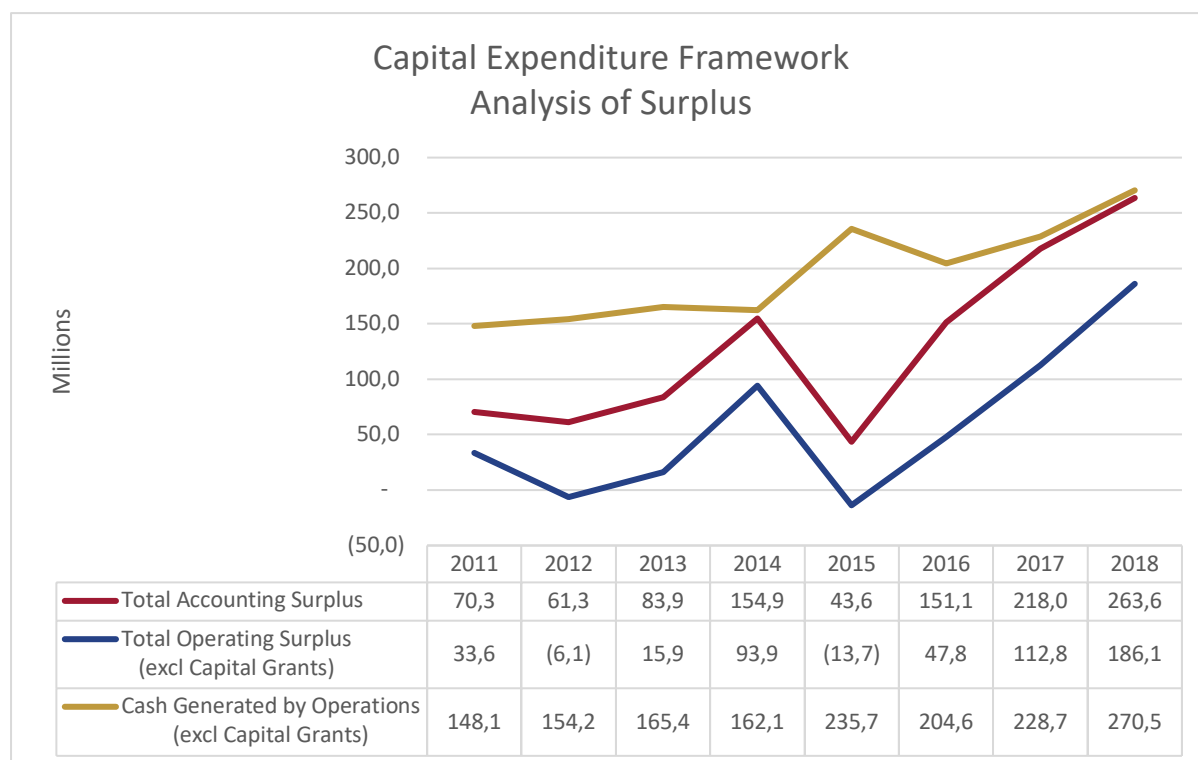


Figure 47: Analysis of Surplus

Income from Electricity Services and Property Rates remain the biggest drivers of Total Operating Income, with a combined contribution of 53%. Income from Water Services and Equitable Share are also important contributors.

Property Rates is considered a more stable income source for the municipality and has annually grown by an average of 8% between 2011 and 2018 to R 309.99 million.

Equitable Share income increased from R 36.78 million to R 110.63 million in 2018. However, the total grants/revenue ratio decreased from 16% in 2016 to 13% in 2018, mainly driven by significant decreases in capital grants received.

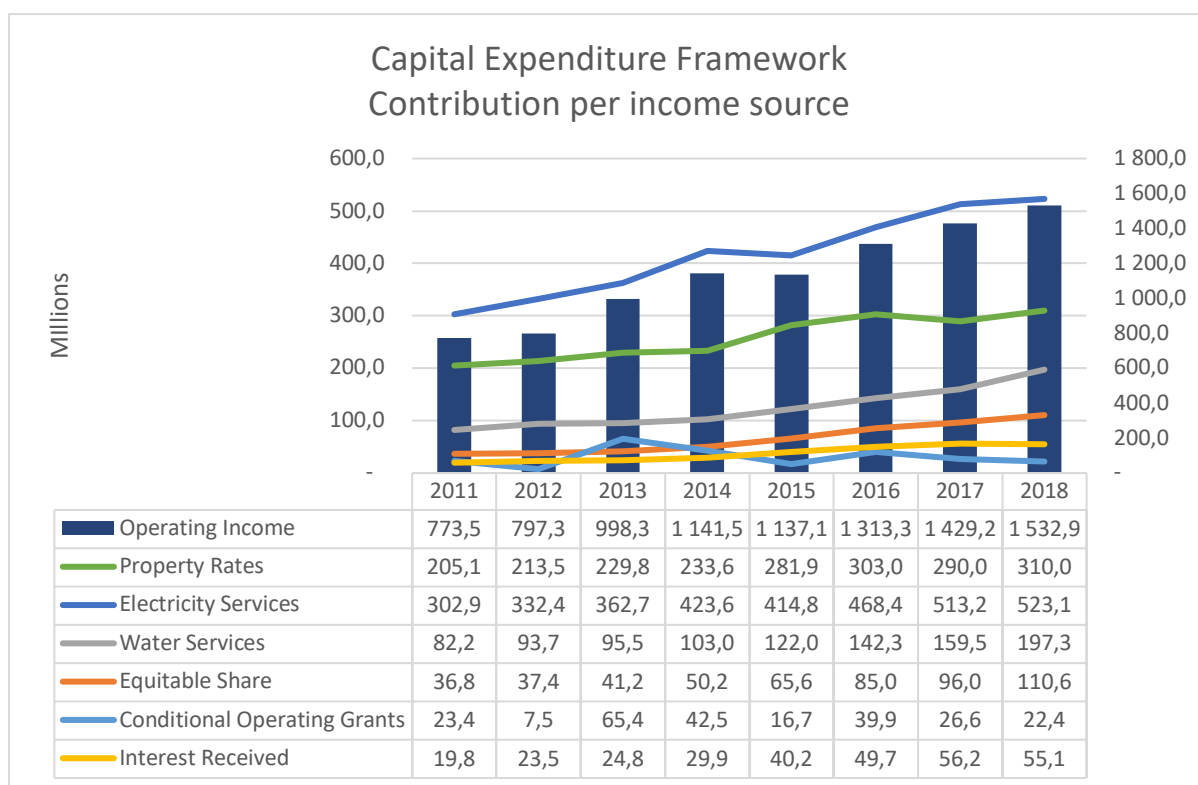


Figure 48: Contribution per income source

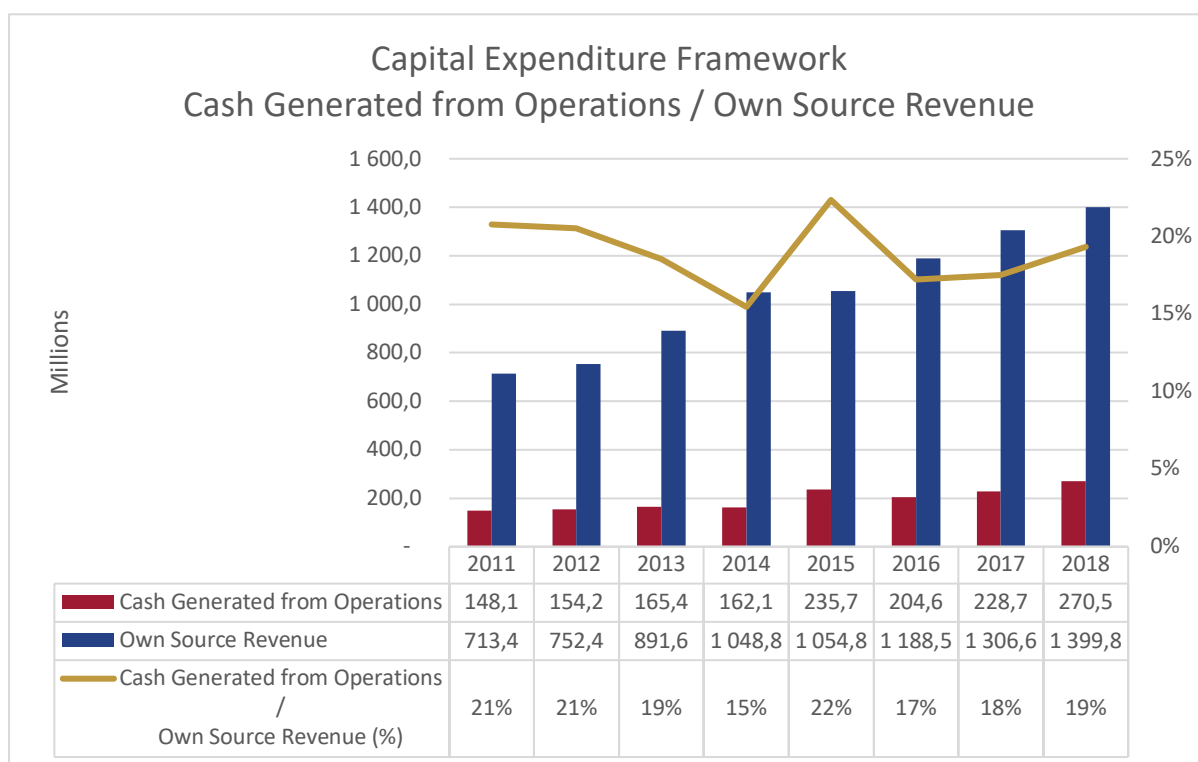
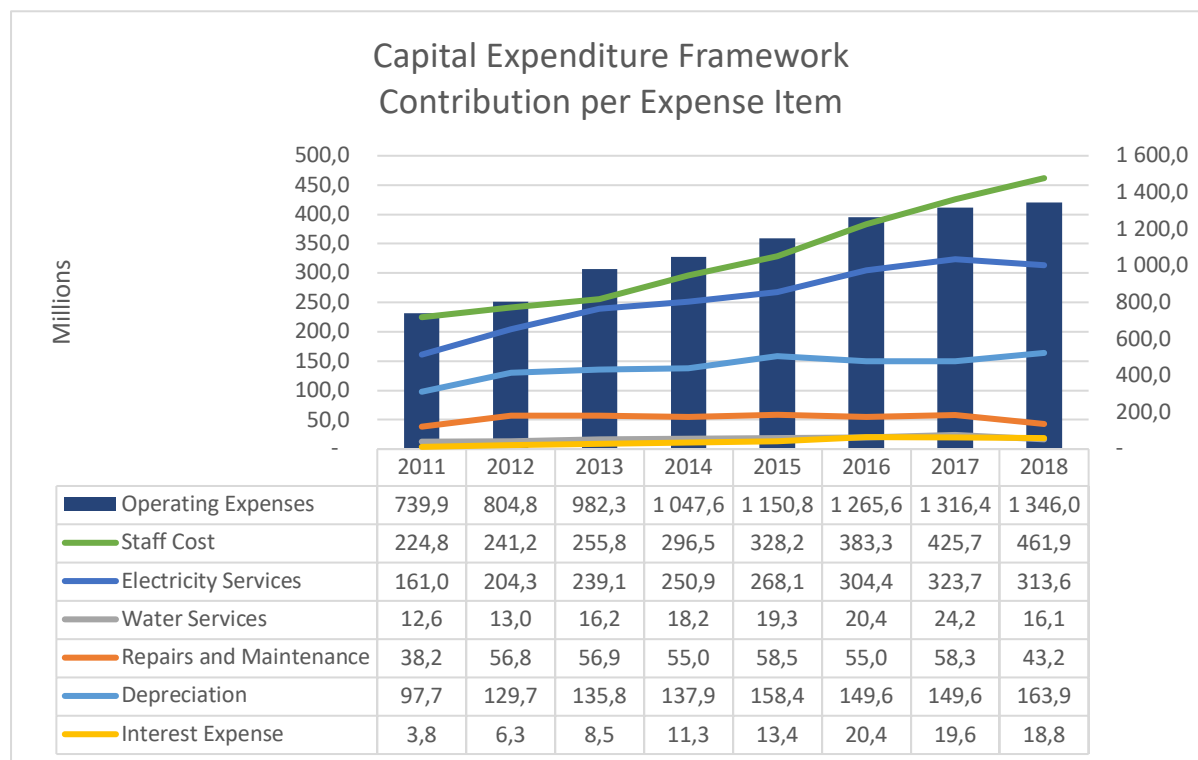


Figure 49: Cash Generated from Operations / Own Source Revenue

Staff Cost, Electricity Bulk Purchases and Depreciation represent 53% of Total Operating Expenses. The annual increases in Staff costs were generally high, with an average increase of 11% in the past 7 years.

Electricity Services, being the largest contributor to Total Operating Income, represents the second largest expense after staff costs. The surplus margins from this service remained high although decreasing from 41% in 2011 to 38% in 2018. Over the short term, expected steep increases in bulk electricity prices may narrow historic margins, lead to increased electricity theft and cause both businesses and higher income households to consider alternative energy sources. This will further reduce electricity sales.

Figure 50: Contribution per Expense Item



Interest received from external investments exceeded interest paid on external borrowings throughout the assessment period; resulting in R 36.33 million accumulated net interest inflow. The decrease in interest received in 2018 is due to a decrease in cash and cash equivalents. The 1% interest paid to total expenditure ratio is very low, highlighting Stellenbosch's limited utilisation of external borrowing and its minimal debt levels. As a consequence a healthy scope exists for taking up borrowing for service delivery and development in the future.

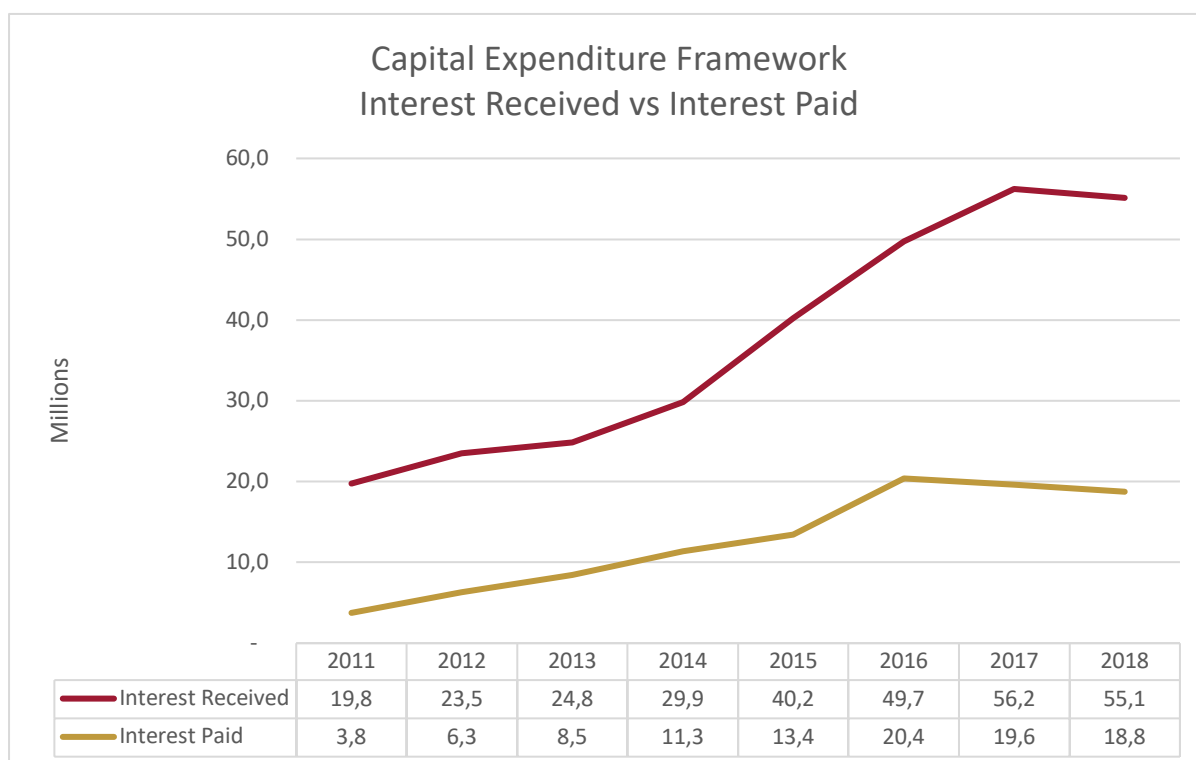


Figure 51: Interest Received vs Interest Paid

Stellenbosch Local Municipality has recorded steady growth in both total income and total expenditure over the 8-year period under review. Total operating income increased to R 1.53 billion against a total operating expenditure of R 1.35 billion.

The gap between total income and total operating expenditure has widened notably since 2016, with income and operating expenditure reflecting annual average growth rates of 11% and 9%. During this same period operating income increased at a sharper rate than operating expenditure, which resulted in larger operating profits.

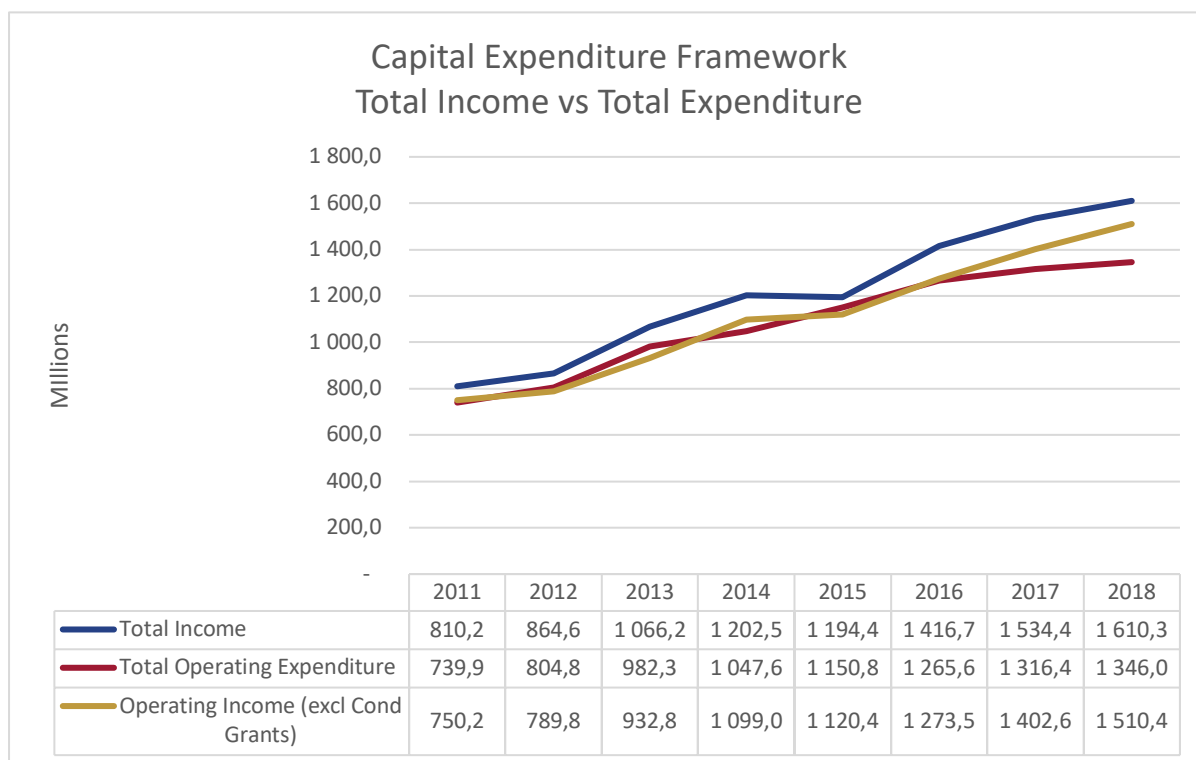


Figure 52: Total Income vs Total Expenditure

Table 64: Contribution per Key Income Source (Rm)

	2011	2012	2013	2014	2015	2016	2017	2018
Property Rates	205.1	213.5	229.8	233.6	281.9	303.0	324.0	310.0
Electricity Services	302.9	332.4	362.7	423.6	414.8	468.4	513.2	523.1
Water Services	82.2	93.7	95.5	103.0	122.0	142.3	159.5	197.3
Equitable Share	36.8	37.4	41.2	50.2	65.6	85.0	96.0	110.6
Conditional Operating Grants	23.4	7.5	65.4	42.5	16.7	39.9	26.6	22.4
Interest Received	19.8	23.5	24.8	29.9	40.2	49.7	56.2	55.1
Operating Income	773.5	797.3	998.3	1 141.5	1 137.1	1 313.3	1 426.5	1 532.9

Table 65: Contribution per Key Expenditure Item (Rm)

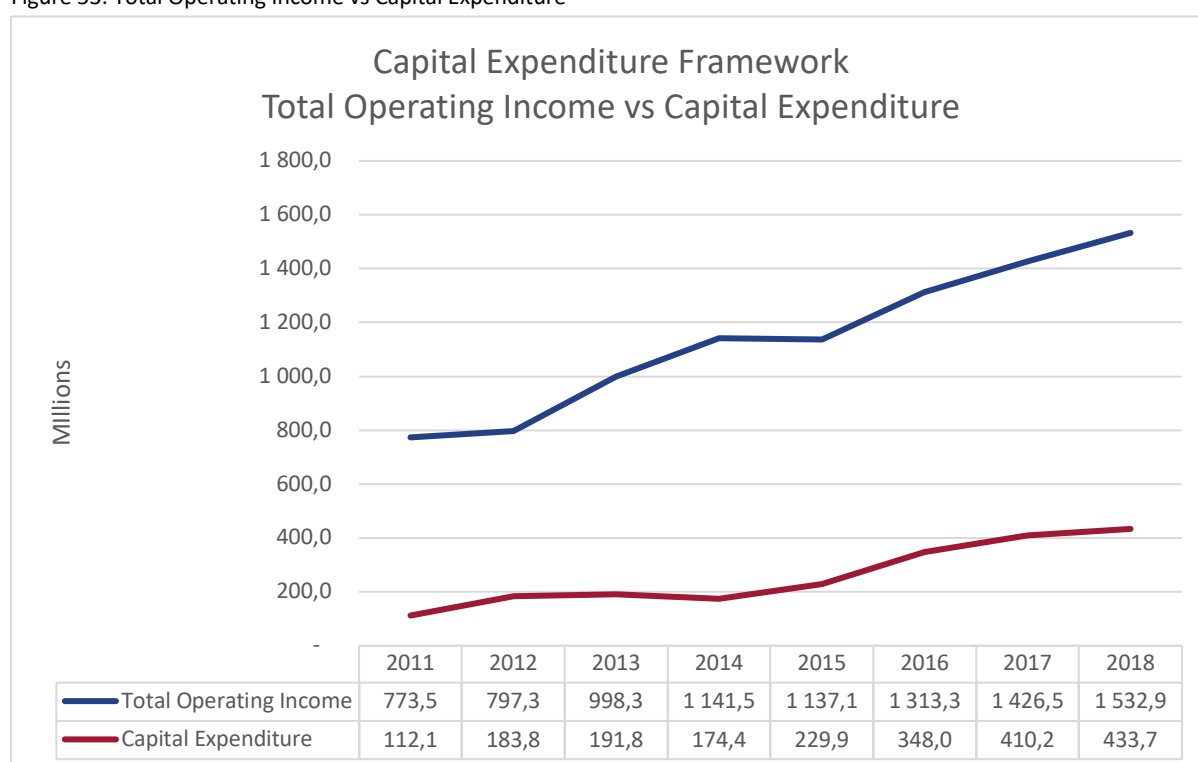
	2011	2012	2013	2014	2015	2016	2017	2018
Staff Cost	224.8	241.2	255.8	296.5	328.2	383.3	423.9	461.9
Electricity Services	161.0	204.3	239.1	250.9	268.1	304.4	323.7	313.6
Water Services	12.6	13.0	16.2	18.2	19.3	20.4	24.2	16.1
Repairs and Maintenance	38.2	56.8	56.9	55.0	58.5	55.0	58.3	43.2
Depreciation	97.7	129.7	135.8	137.9	158.4	149.6	149.6	163.9
Interest Expense	3.8	6.3	8.5	11.3	13.4	20.4	19.6	18.8
Operating Expenses	739.9	804.8	982.3	1 047.6	1 150.8	1 265.6	1 307.5	1 346.0

6.3.3 Cash Flow

The increased financial performance and the positive R 270.47 million cash generated by Stellenbosch (excluding capital grants) in 2018, puts the municipality in a strong position to maintain and increase capital expenditure and timeous investment in capital asset replacement.

Total capital expenditure for the past 8 years was R 2.08 billion. It's been characterised by a sharp and sustained increase of almost 150% from 2014-2018 with minimal external financing. The Capital Funding Mix of Stellenbosch, over the review period, has been reliant on the municipality's own Cash Reserves (66.4%). The other funding sources were Capital Grants (23.6%), Borrowings (9.6%) and Sale of Fixed Assets (0.4%). Noteworthy is that external borrowings were not utilised since 2016.

Figure 53: Total Operating Income vs Capital Expenditure



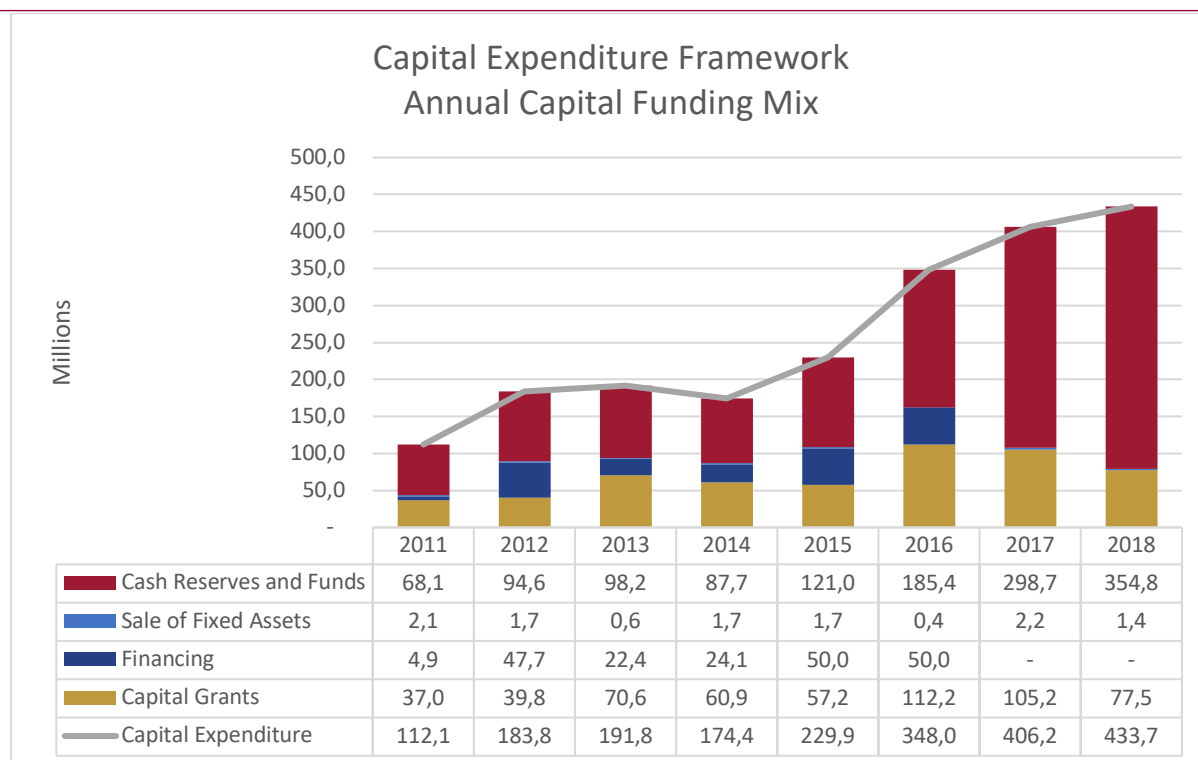


Figure 54: Annual Capital Funding Mix

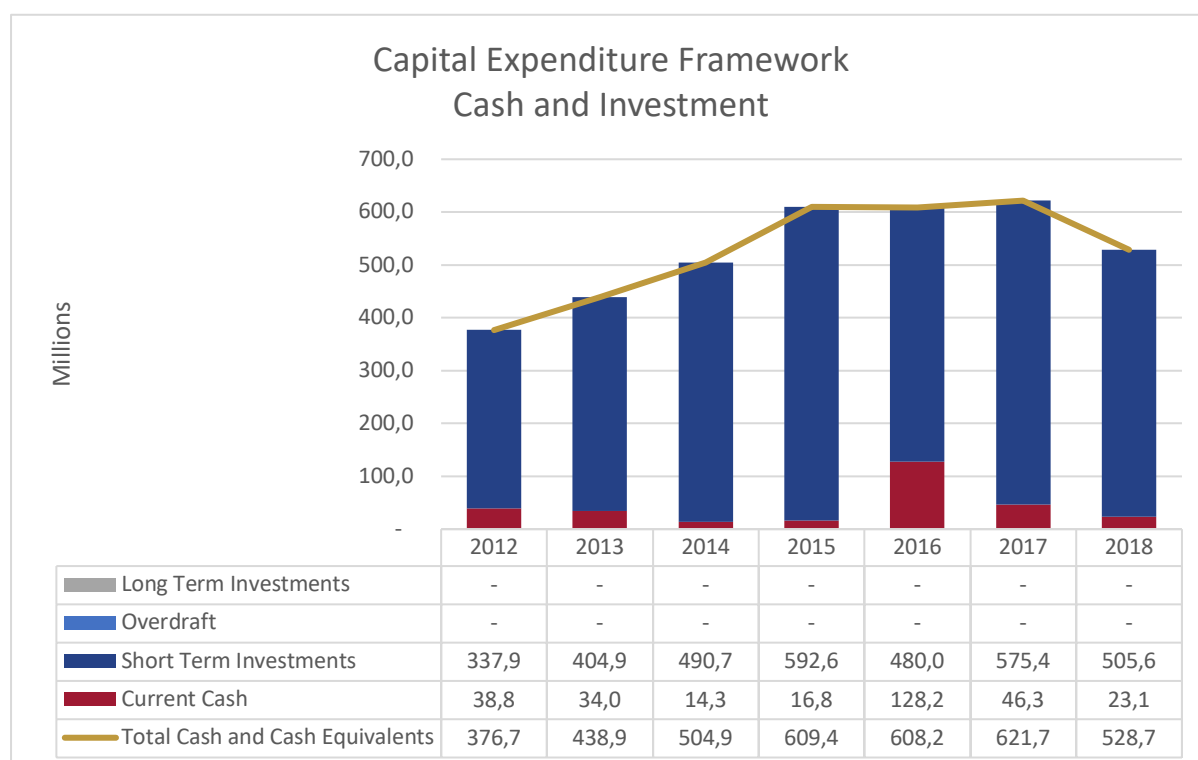


Figure 55: Cash and Investments

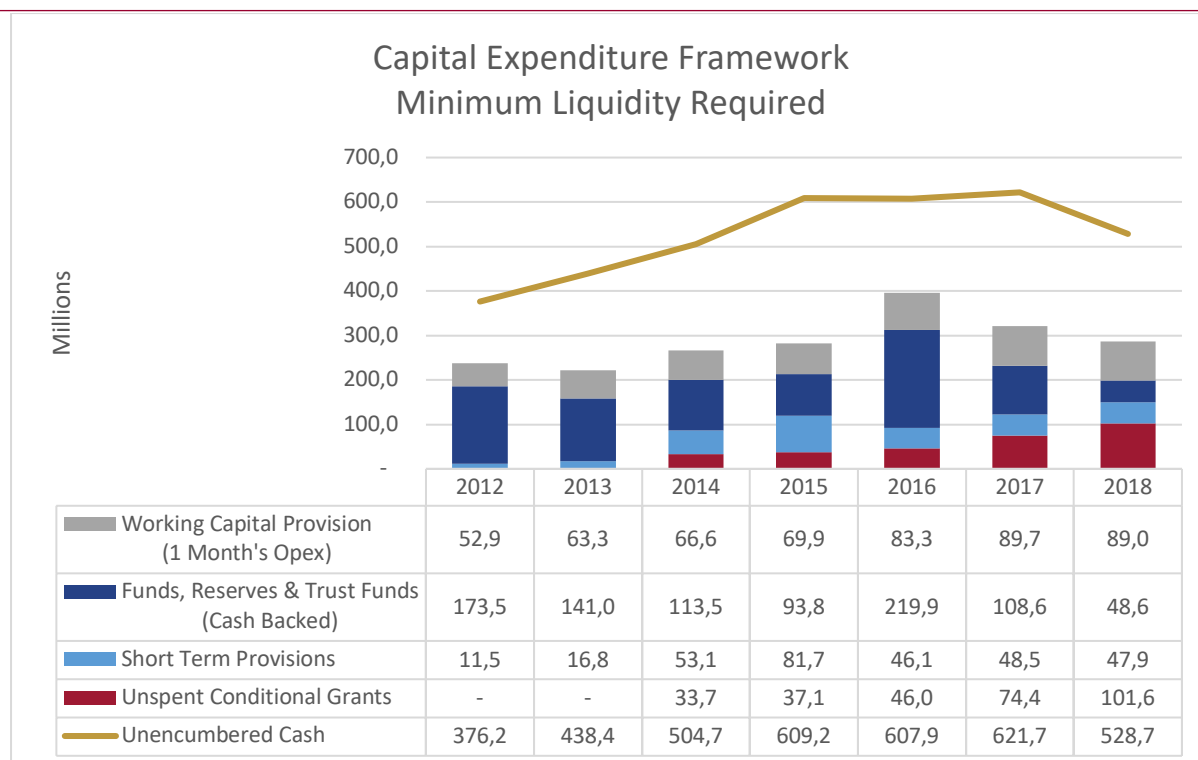


Figure 56: Minimum Liquidity Required

Total cash and cash equivalents increased from R 325.0 million in 2011 to R 528.7 million in 2018. This level of cash sufficiently covers the minimum liquidity requirements which includes Short Term Provisions of R 47.9 million, Unspent Conditional Grants and Receipts of R 101.6 million, Cash-backed reserves of R 48.6 million and Working capital provision (including one month's opex) of R 89.0 million. The cash surplus was R 241.6 million at the end of the 2018 financial year, decreased from the highest level of R 326.6 million in 2015.

The cash coverage ratio (including working capital) remained positive at 1.8 as at the end of the 2018 financial year.

Table 66: Minimum Liquidity Requirements

	2011	2012	2013	2014	2015	2016	2017	2018
Unspent Conditional Grants	-	-	-	33.7	37.1	46.0	74.4	101.6
Short Term Provisions	5.4	11.5	16.8	53.1	81.7	46.1	48.5	47.9
Funds, Reserves & Trust Funds (Cash Backed)	125.1	173.5	141.0	113.5	93.8	219.9	108.6	48.6
Total	130.5	185.0	157.8	200.4	212.6	312.0	231.5	198.1
Uncommitted Cash	325.0	376.2	438.4	504.7	609.2	607.9	621.7	528.7
Cash Coverage Ratio (excl. Working Capital)	2.5	2.0	2.8	2.5	2.09	1.9	2.7	2.7
Working Capital Provision (1 Month's Opex)	49.4	52.9	63.3	66.6	69.9	83.3	89.7	89.0
Cash Coverage Ratio (incl. Working Capital)	1.8	1.6	2.0	1.9	2.2	1.5	1.9	1.8
Minimum Liquidity Required	179.9	237.9	221.1	266.9	282.5	395.4	321.2	287.1
Cash Surplus/(Shortfall)	145.2	138.3	217.3	237.7	326.6	212.6	300.5	241.6

6.4 Outcome of the Independent Financial Assessment

Stellenbosch Local Municipality remained in a profitable position during the past 8 years of assessment. This was demonstrated by an Accounting Surplus of R 263.58 million posted at the end of the 2018 financial year, which increased from R 70.28 million in 2011.

Positive to note is that the municipality still managed to generate an operating surplus of R 186.10 million compared to R 33.63 million in 2011 when capital grants are excluded.

The municipality's strong financial performance, together with a healthy collection rate of 96%, enabled the municipality to generate R 270.47 million in cash from its operations (excl. capital grants). This was R 122.40 million higher than the cash generated from operations in 2011.

In 2018, the municipality spent R 433.68 million on capital infrastructure programs utilising most of its cash generated from operations (R 354.79 million) as well as Capital Grants to the value of R77.48 million. The funding structure was similar during the previous financial year.

In absence of new external loan liabilities taken during the past two years, the municipality maintained a healthy lower level of gearing of 11%, which is also the average level for the 8 years of assessment. The debt service coverage ratio was high in 2018(8.49), mainly as a result of higher repayment capability brought about by the positive cash generated by operations. These ratios are an indication that Stellenbosch still has the potential to increase gearing and obtain a more balanced funding mix.

Current Assets exceeded Current Liabilities by R 509.09 million in 2018. The gap between Current Assets and Current Liabilities remained positive during the assessment period. The healthy liquidity position was represented by a Liquidity Ratio of 2.19:1 in 2018 (2.19:1 at the end of the 2017 financial year). The ratio remains strong at 2.01:1 should debtors older than 30 days be excluded. This is underlined by the cash coverage ratio (including 1 month's working capital) of 1.8 at the end of the 2018 financial year.

The cash and investments balance of R 528.7 million (2017/18: R 621.7 million) was sufficient to cover minimum liquidity required. This comprised of Short Term Provisions of R 47.9 million, Unspent Conditional Grants and Receipts of R 101.6 million, Cash-backed reserves of R 48.6 million and working capital provision (including 1 month's opex) of R 89.0 million, resulting in a cash surplus of R 241.6 million at year end (2017: R300.5 million).

Cognisance is taken of the increase in unspent conditional grants, especially in the last two financial periods.

6.4.1 Strengths

- Strong balance sheet & liquidity position; low gearing;
- Investment-grade credit rating;
- Strong cashflows from own operations and limited reliance on transfers from national and provincial treasuries;
- High collection rate of 96%;
- Accelerated capex since 2014;
- Diversified economy with educational infrastructure;

- Aggressive addressing of backlogs; and
- High-quality financial and institutional governance evidenced by among others, clean audits.

6.4.2 Weaknesses

- Own cash reserves decreasing due to heavy reliance on own cash resources to fund its capital programme and the low reliance on utilisation of external borrowing;
- Urban limits & difficulties to densify;
- Repairs and Maintenance – below National Treasury Norm;
- High levels of unspent conditional grants since 2017; and
- Declining GVA growth rate.

6.5 Key Assumptions

The following key assumptions were used in the Long Term Financial Model:

Table 67: Key assumptions used in the LTFM

Variable	Base Case Average for a 10-Year Planning Period (per annum)
RSA consumer inflation rate (CPI)	5.7%
Population Growth Rate	1.2%
GVA Growth Rate	2.8%
Short term investment rate (Margin above CPI)	3.0%
Electricity Price Elasticity of Demand	-0.5
Water Price Elasticity of Demand	-0.2
Employee related cost escalation	9.1%
Bulk electricity cost escalation	6.9%
Collection Rate of customer billings	96.3%

6.6 Future Revenues

6.6.1 Municipal Revenue Risk Indicator (MRRI) = “Medium”

The latest iHS Global Insight update of the Stellenbosch economy reveals that the average economic growth rate during the past 5 years of 1.3% p.a is the 3rd highest of all municipalities in the district and with a relatively high Tress index²⁹ In combination these 2 factors result in an Economic Risk component of the MRRI of “Medium”. However, the size of the local economy and GVA growth rate which is higher than similar Municipalities help moderate the risk metric.

²⁹An increase in the tress index of a region reflects an increase in the dependence of the local economy on a single or a few economic activities and is an ostensibly negative trend.

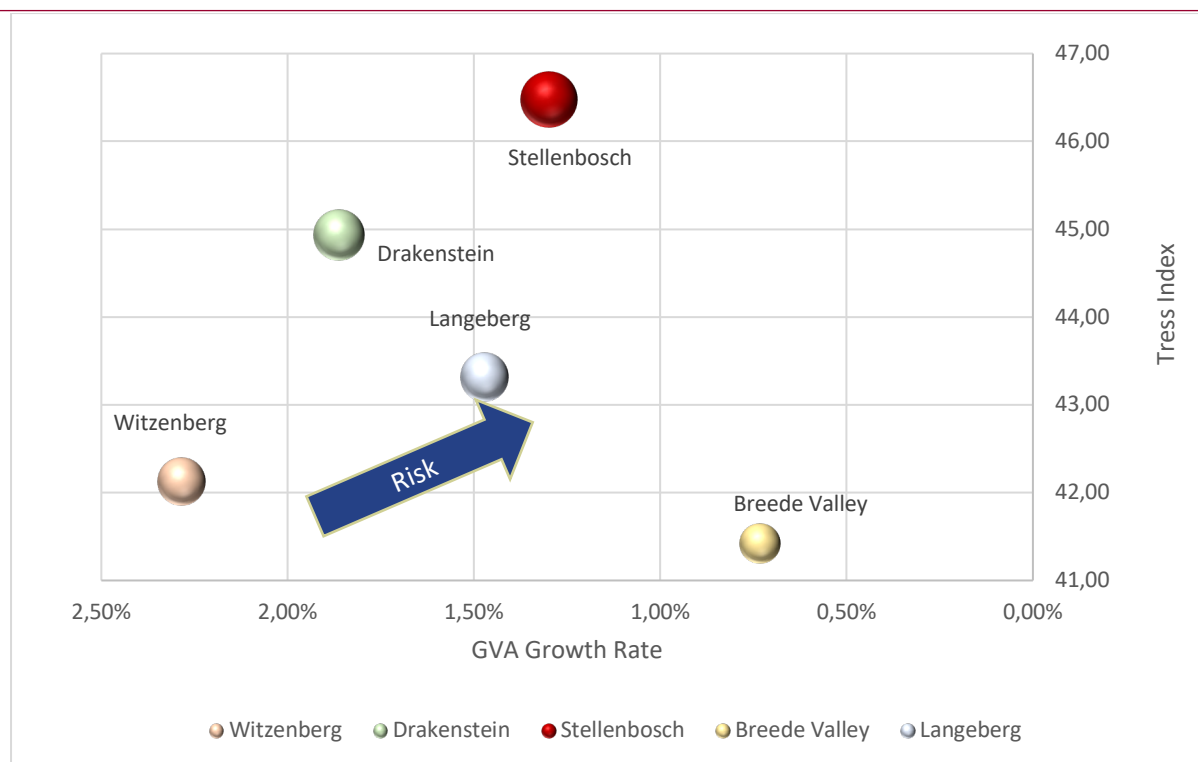


Figure 57: Economic Risk Component

The graph below indicates the non-payment risk by plotting the percentage of households earning less than R30 000 p.a and the unemployment rate. In comparison to municipalities in the region both these factors are higher than its peers in the case of Stellenbosch. Although these metrics are quite low within a national and provincial context the Household Ability to Pay Risk component of the MRRI is rated “Medium to High”.



Figure 58: Household Ability to Pay Risk Component of MRRI

Based on the above, the overall Municipal Revenue Risk Indicator of Stellenbosch is considered to be “Medium”.

In 2018 the declining trend of both Real Municipal Revenue per Capita and Real GVA per Capita evidenced since 2013, continued. It is unlikely that real revenues per capita can increase significantly in future without a structural change in the economy and a return to economic growth rates which will help create some fiscal space for tariff adjustments. This issue was dealt with in the recent State of City Finances Report (SACN 2018) which assessed the progressiveness of municipal bills and the impact this might have on tariffs.

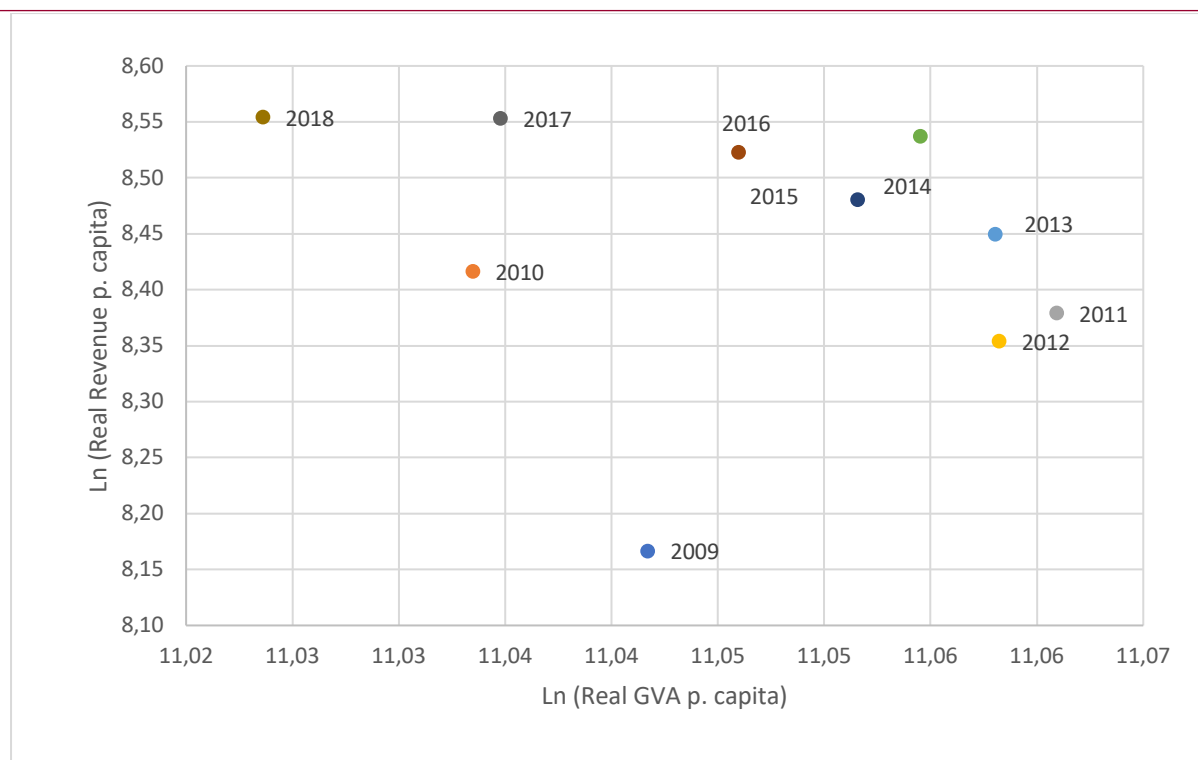


Figure 59: Real Revenues per Capital vs Real GVA

In Stellenbosch we note the rate of increase in the Real Revenue per Capita, but concurrently there is a decreasing growth rate in the Income per Capita. Such diverging trends place additional proportional financial pressure on households. The municipality should specifically note this situation when determining the fixed-cost portion of the household municipal bill going forward.

A comparison of the Average Household Bill for the Middle Income- and Affordable Range of a selected number of municipalities in the Western Cape (extracted from Budget Table SA14 as posted on the National Treasury local government database or the municipalities' websites), based on the 2018/19 tariffs, reveals that Stellenbosch features in the 2nd quartile of these municipalities. This suggest that the tariffs of Stellenbosch is comparatively more affordable.

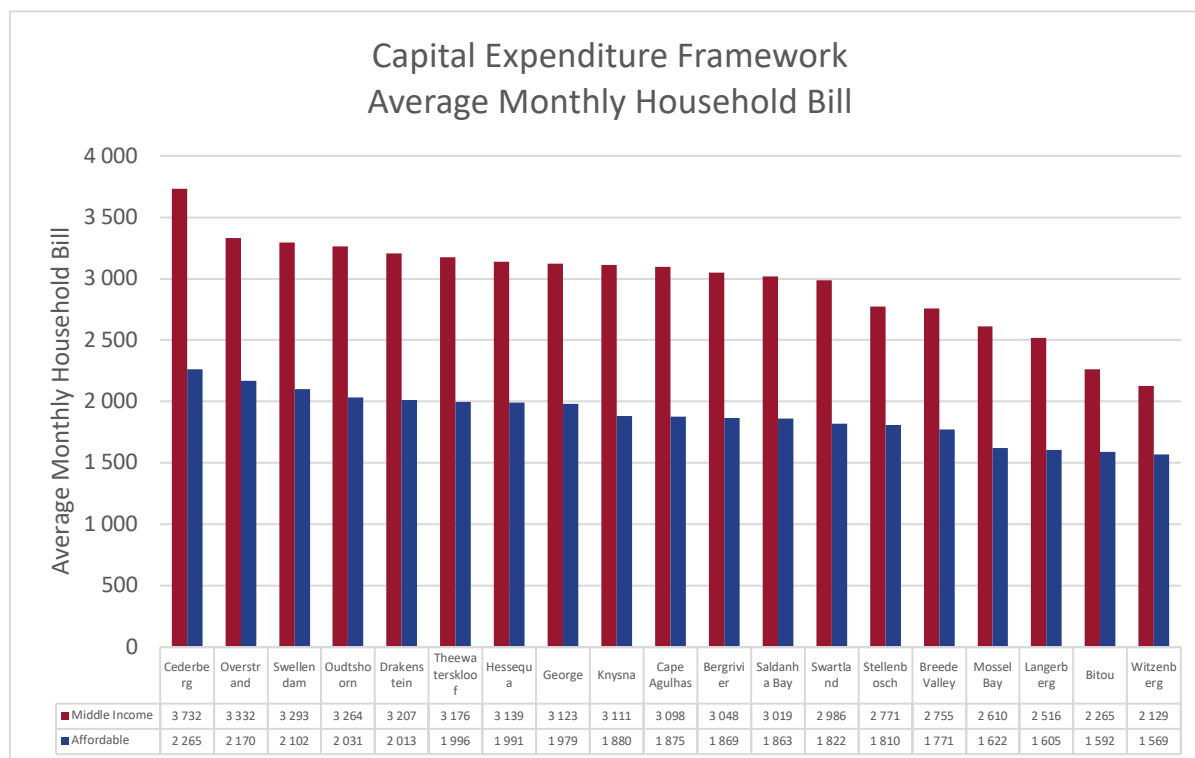


Figure 60: Average Monthly Household Bill

6.6.2 Municipal Revenues

In 2018 the Real Revenue per Capita of R 5 173 p.a. exceeded the expected amount for the Real GVA per Capita as researched by Schoeman³⁰. This provides comfort since the proportional growth of indigent households the model forecast is in line with current data.

³⁰ Fiscal Performance of Local Government in South Africa - an Empirical Analysis; Niek Schoeman; UP 22 July 2011; https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=ILPF67&paper_id=40

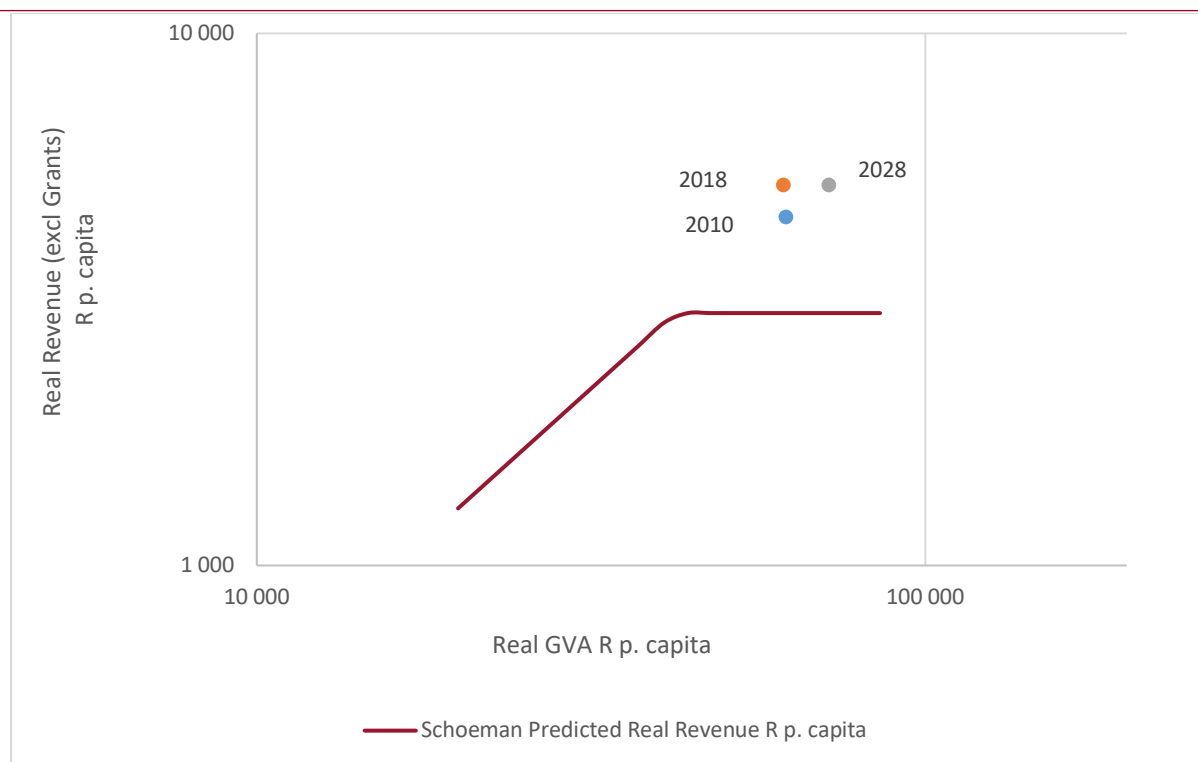


Figure 61: Real Revenue per Capita Across Time

Future Nominal Revenue (excluding Grants) is growing at an average rate of over 7 % p.a. Over the forecast period the municipality generates positive cash flow from operations and maintains a positive Accounting Surplus. The Total Operating Surplus (excluding grants) is negative up to 2028.

Improvements in revenue are ascribed to (i) tariff increases (ii) increased sales and (iii) additional revenue sources and importantly, (iv) sustained revenue-collection rates of over 96%. After 2022 we forecast a sustained period of Operating Surpluses.

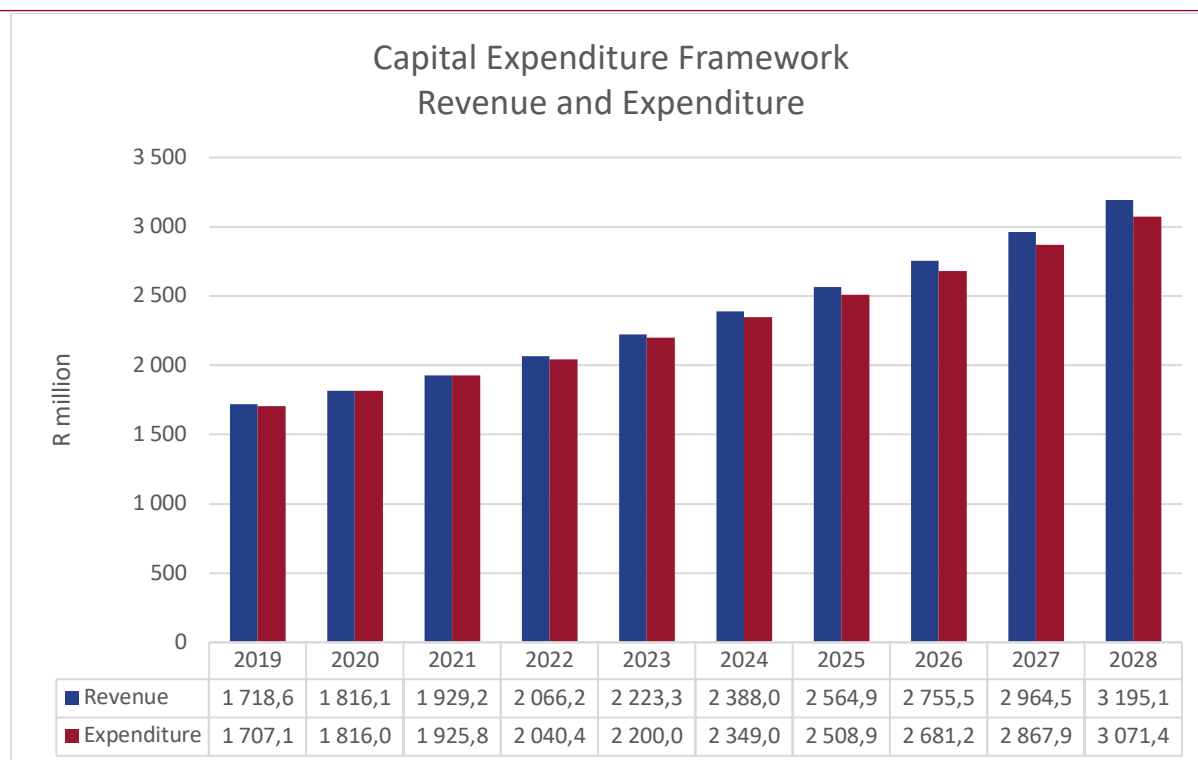


Figure 62: Revenue and Expenditure

The Stellenbosch municipal region is not immune to national and provincial socio-economic conditions. In the graph below, one notices a decline in the Real Revenue per Capita to 2022. This is largely the result of the rate of increase in population growth being higher than the rate of increase in total revenue of the municipality. Both the Real GVA per Capita and the Real Revenue per Capita are expected to improve after 2022. This is due to an economic growth rate expected to exceed the population growth rate at that time but is highly dependent on broader socio-economic conditions.

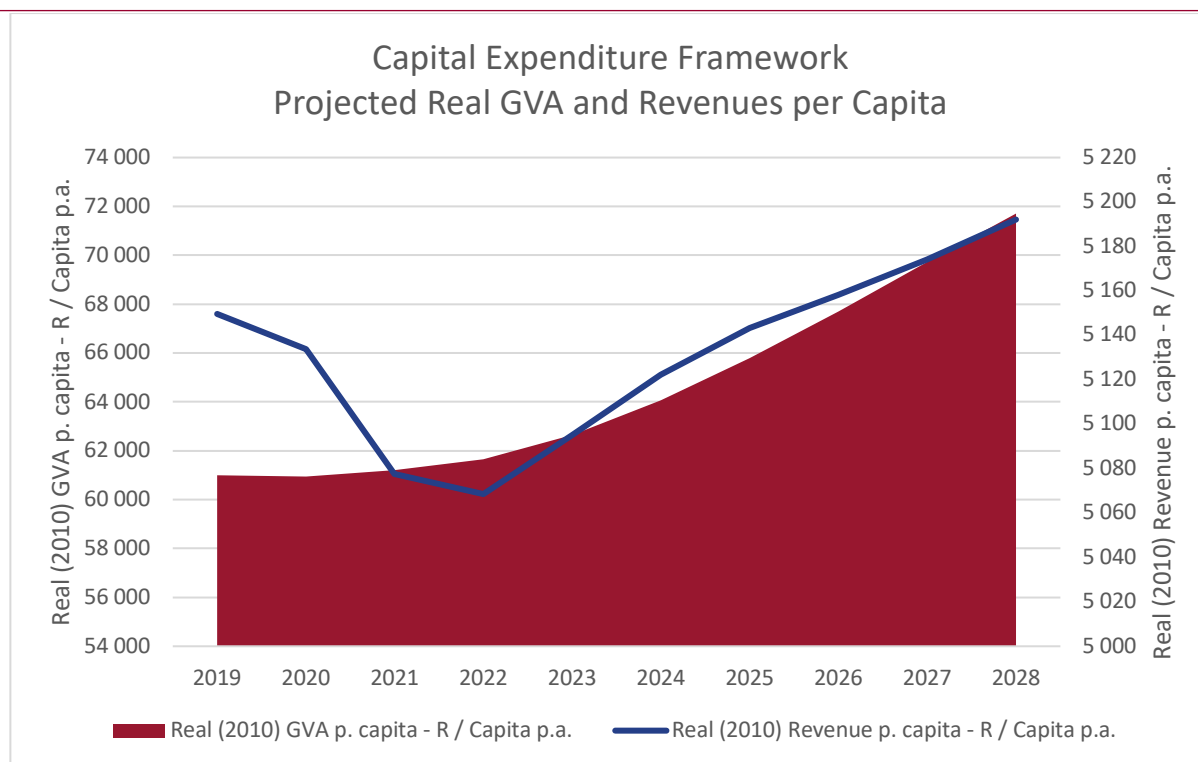


Figure 63: Projected Real GVA and Revenues per Capita

6.7 Affordable Future Capital Investment

The total affordable capital expenditure for the 10-year planning period amounts to R 4 129 million.

This 10-year amount was calculated by the Long Term Financial Model:

- by relying on and maintaining the capital programme and funding mix over the MTREF period up to 2020/21 (3 years), as contained in the latest approved MTREF budget of Stellenbosch; and
- forecasting the optimal capital programme and funding mix, taking several indicators and parameters into account, for the next 7 years of the forecast period.

The annual affordable envelope, which entails the forecast capital expenditure and proposed funding mix per annum is dealt with in detail in the next section of this report.

6.7.1 MTREF Capital Funding Mix

Stellenbosch Municipality's MTREF budget 2018/19 – 2020/21 expects a capital budget amounting to R1.4 billion and funded as follows:

Table 68: 3-Year MTREF Funding Mix

R'000	Total	2018/19	2019/20	2020/21
Loans	340 000	160 000	100 000	80 000
Cash	789 348	276 587	308 832	203 929
Grants	219 260	91 804	58 980	68 477
Total	1 348 608	528 391	467 812	352 406

The Long Term Financial Model accommodated the increased Borrowing of R340m, Internally Generated Funding of R789 m and Capital Grants of R219m for the MTREF period of 3 years to 2020/21 and allowed the model to calculate the future funding mix. Here we note the potential impact of the strong liquidity position on capital expenditure. Following sustained increases in the capital expenditure since 2014, this now declines over the MTREF-period to about R353m in 2020/21. To keep pace with anticipated population growth and ongoing investment in new infrastructure as well as upgrading and renewal projects, we increased the capital expenditure by 2% per year from 2020/21 over the planning period. The municipality has both sufficient own resources and capacity to borrow, allowing it to accelerate capital investment, despite the decreased grant transfers. (Fluctuations in grant amounts due to the allocation of housing grants for top structures and for infrastructure in different years.)

The capital expenditure budget of the municipality is financially feasible. Due to the healthy liquidity position, the budgeted capital expenditure can be implemented. Cash available is sufficient to cover the minimum recommended liquidity level to cater for unspent conditional grants, short term provisions, and working capital. These findings are illustrated in the graphs below.

The municipality's mainly relies on own reserves to fund the capital expenditure. The strong financial and liquidity position of the municipality allows it to accelerate the capital investment programmes which can be supported by borrowing.

6.7.2 10-Year Capital Funding Mix

Table 69: 10-Year Capital Funding Mix

Source	Rm	%
Public & Developers' Contributions	0	0%
Capital Grants	897	22%
Financing	1 529	37%
Cash Reserves and Funds	1 703	41%
Cash Shortfall	0	0%
Capital Expenditure	4 129	100%

Due to the prevailing national fiscal constraint, reliance on grant funding in future is probably doubtful and the amount of capital transfers in this latest estimate, when compared to previous estimates, has declined.

A balanced funding mix, incorporating a conservative level of external borrowing, will preserve Stellenbosch's own cash resources and will improve long term financial sustainability. Equally important is the average duration at which external borrowing are obtained in the market and the impact that this may have on liquidity and gearing levels. The most optimal average duration for loans is forecast at 13 years, to avoid breaching liquidity and/or gearing levels. IPM observed that Stellenbosch will breach minimum liquidity levels should an average duration of 10 years be achieved, while an average duration of 15 years may result in a breach of the upper gearing limit of 35%. Even at this upper gearing limits, these levels remain affordable and sustainable.

6.8 Scenarios

In the scenario analysis we developed two basic scenarios to compare to the Base Case. The Base Case reflects the model forecast. The Upside and Downside Scenarios were developed by adjusting (upwards and downwards, respectively) 6 variables as follows:

Table 70: Variables assessed in a Scenario Analysis

Variable	Base Case	Upside % of Base Case	Downside
Population Growth Rate	100%	98%	102%
GVA Growth Rate	100%	120%	80%
Employee related cost escalation (Margin above Inflation rate)	100%	80%	120%
Bulk electricity cost escalation (Margin above Inflation rate)	100%	80%	120%
Bulk water cost escalation (Margin above Inflation rate)	100%	80%	120%
Collection Rate of customer billings	100%	110%	90%

The impact of these adjustments was measured on 11 selected financial metrics. We noted the following outcomes:

- Average Annual Increase in Revenue differs only marginally over the three scenarios. The impact on percentage increases in Expenditure is more pronounced. Cash generated by Operations ranges between –R 247m and R 3 207m. The cash position after 10 years remains very healthy at R2 213 m in the base case. In the down-side case this amount is in deficit of R 247m;

- The 10-year capital investment for the Base Case is R 4 129 million and R4 701 million in the Upside. This is a modest change and is also evident in the External Loan Financing and Gearing during the planning period; and
- The great variation of outcome for a realistic combination of input variables, demonstrates the need to manage the municipality's finances with care and discipline.

Table 71: Outcome of Scenario Analysis

Outcome	Base Case	Upside	Down Side
Average annual % increase in Revenue	7.1%	7.2%	7.0%
Average annual % increase in Expenditure	9.1%	8.9%	10.3%
Accounting Surplus accumulated during Planning Period (Rm)	R 454	R 1 304	-R 1 926
Operating Surplus accumulated during Planning Period (Rm)	-R 443	R 408	-R 2 823
Cash generated by Operations during Planning Period (Rm)	R 2 190	R 3 215	-R 246
Average annual increase in Gross Consumer Debtors	6.6%	-8.5%	19.4%
Capital investment programme during Planning Period (Rm)	R 4 129	R 4 852	R 3 495
External Loan Financing during Planning Period (Rm)	R 1 529	R 1 640	R 1 305
Cash and Cash Equivalents at the end of the Planning Period (Rm)	R 454	R 839	-R 1 519
Gearing at the end of the Planning Period	36.3%	38.6%	31.2%
Debt Service to Total Expense Ratio at the end of the Planning Period	7.5%	8.2%	9.7%

6.9 Ratio Analysis

The Base Case forecast ratios are presented below. The model provides comfort that the municipality is sustainable in future - on condition that it operates within the assumed benchmarks set in the financial plan.

Table 72: Outcome of Future Ratio Analysis

		N.T. NORM	1 2019	3 2021	5 2023	7 2025	9 2027
FINANCIAL POSITION							
ASSET MANAGEMENT							
R29	Capital Expenditure / Total Expenditure	10% - 20%	23.6%	15.5%	14.5%	13.6%	12.8%
R27	Repairs and Maintenance as % of PPE and Investment Property	8%	1.7%	1.7%	2.3%	2.3%	2.3%
DEBTORS MANAGEMENT							
R4	Gross Consumer Debtors Growth		7.7%	7.6%	5.5%	5.9%	6.3%
R5	Payment Ratio / Collection Rate	95%	96.1%	96.1%	96.5%	96.5%	96.5%
	Net Debtors Days	30	76	65	57	49	43
LIQUIDITY MANAGEMENT							
R49	Cash Coverage Ratio (excl. Working Capital)		5.4 : 1	9.6 : 1	5.3 : 1	4.3 : 1	4 : 1
R50	Cash Coverage Ratio (incl. Working Capital)		2.3 : 1	1.3 : 1	1.2 : 1	1.2 : 1	1.3 : 1
R51	Cash Surplus / Shortfall on Minimum Liquidity Requirements		R 255.2 m	R 50.8 m	R 49.9 m	R 53.9 m	R 89.8 m
R1	Liquidity Ratio (Current Assets : Current Liabilities)	1.5 - 2.0 : 1	1.6 : 1	1 : 1	1 : 1	1 : 1	1 : 1
LIABILITY MANAGEMENT							
R45	Debt Service as % of Total Operating Expenditure	6% - 8%	3.2%	4.0%	5.5%	6.7%	7.1%
R6	Total Debt (Borrowings) / Operating Revenue	45%	19.2%	23.3%	31.3%	35.2%	36.6%
R7	Repayment Capacity Ratio		1.09	2.30	3.23	3.79	3.91
R46	Debt Service Cover Ratio (Cash Generated by Operations / Debt Service)		5.9 : 1	3 : 1	2.3 : 1	1.9 : 1	1.9 : 1
SUSTAINABILITY							
	Net Financial Liabilities Ratio	< 60%	18.6%	39.8%	47.3%	50.9%	50.6%
	Operating Surplus Ratio	0% - 10%	-4.9%	-3.5%	-2.9%	-1.6%	-0.4%
	Asset Sustainability Ratio	> 90%	21.1%	21.3%	21.4%	21.4%	21.4%
FINANCIAL PERFORMANCE							
EFFICIENCY							
R42	Net Operating Surplus / Total Operating Revenue	>= 0%	-4.9%	-3.5%	-2.9%	-1.6%	-0.4%
R43	Electricity Surplus / Total Electricity Revenue	0% - 15%	38.2%	38.5%	39.5%	40.7%	41.9%
R44	Water Surplus / Total Water Revenue	>= 0%	92.0%	91.9%	92.3%	92.3%	92.2%
REVENUE MANAGEMENT							
R8	Increase in Billed Income p.a. (R'm)		R 97.3 m	R 98.1 m	R 112.7 m	R 131.8 m	R 153.0 m
R9	% Increase in Billed Income p.a.	CPI	8.2%	7.1%	7.1%	7.2%	7.3%
R12	Operating Revenue Growth %	CPI	6.1%	5.9%	7.6%	7.5%	7.6%
R14	Contribution per Income Source: Equitable Share		7.6%	8.1%	8.6%	8.8%	9.0%
R15	Contribution per Income Source: Conditional Operating Grants		1.3%	2.1%	1.8%	1.8%	1.7%

		N.T. NORM	1 2019	3 2021	5 2023	7 2025	9 2027
R16	Contribution per Income Source: Property Rates		20.1%	19.6%	19.2%	19.0%	19.0%
R17	Contribution per Income Source: Electricity Services		33.8%	34.0%	34.0%	34.1%	34.3%
R18	Contribution per Income Source: Water Services		13.9%	14.4%	14.5%	14.3%	13.9%
R19	Contribution per Income Source: Interest on Investments		2.7%	1.2%	0.9%	1.0%	1.1%
R20	Annual Increase per Income Source: Equitable Share		12.2%	10.4%	10.7%	8.6%	8.8%
R21	Annual Increase per Income Source: Property Rates		5.7%	5.5%	6.5%	7.1%	7.5%
R22	Annual Increase per Income Source: Electricity Services		5.1%	7.1%	7.2%	7.7%	7.9%
R23	Annual Increase per Income Source: Water Services		14.2%	8.2%	6.9%	6.4%	5.9%
R24	Annual Increase per Income Source: Interest on Investments		-21.3%	-40.6%	12.9%	10.5%	13.9%
R47	Cash Generated by Operations / Own Revenue		21.6%	14.0%	14.5%	14.7%	15.0%
R48	Cash Generated by Operations / Total Operating Revenue		19.6%	12.6%	13.0%	13.1%	13.4%
EXPENDITURE MANAGEMENT							
	Creditors Payment Period	30	84	101	99	96	93
R30	Contribution per Expenditure Item: Staff Cost (Salaries, Wages and Allowances)	25% - 40%	26.2%	29.7%	29.9%	30.1%	30.5%
	Contribution per Expenditure Item: Contracted Services	2% - 5%	9.9%	9.9%	9.8%	10.3%	10.7%
R31	Contribution per Expenditure Item: Electricity Services		15.2%	17.1%	17.1%	17.2%	17.3%
R32	Contribution per Expenditure Item: Water Services		0.8%	0.9%	0.9%	0.9%	0.9%
R33	Contribution per Expenditure Item: Repairs & Maintenance		4.1%	4.5%	5.6%	5.3%	5.0%
R34	Contribution per Expenditure Item: Depreciation and Asset Impairment		7.9%	8.8%	8.2%	7.7%	7.2%
R35	Contribution per Expenditure Item: External Interest Charged		1.5%	2.0%	2.8%	3.3%	3.5%
R36	Annual Increase per Expenditure Item: Staff Cost (Salaries, Wages and Allowances)		26.8%	7.5%	6.5%	6.7%	7.0%
R37	Annual Increase per Expenditure Item: Electricity Services		8.4%	6.8%	6.1%	6.6%	6.8%
R38	Annual Increase per Expenditure Item: Water Services		11.9%	8.5%	4.8%	6.9%	7.0%
R39	Annual Increase per Expenditure Item: Repairs & Maintenance		111.6%	7.7%	30.2%	2.9%	2.9%
R40	Annual Increase per Expenditure Item: Depreciation		7.2%	5.5%	2.9%	3.0%	3.0%
R41	Annual Increase per Expenditure Item: External Interest Charged		75.3%	12.8%	21.1%	13.5%	9.7%
GRANT DEPENDENCY							
R10	Total Grants / Total Revenue		13.8%	13.3%	13.9%	13.9%	13.9%
R11	Own Source Revenue to Total Operating Revenue		91.1%	89.8%	89.6%	89.5%	89.3%
	Capital Grants to Total Capital Expenditure		17.4%	19.4%	23.1%	24.1%	25.6%
BUDGET IMPLEMENTATION							
R28	Actual Capital Expenditure / Budgeted Capital Expenditure						

6.10 Outcome of the Long Term Financial Model

6.10.1 The socio-economic base and future revenue

- Strong economic base and diversified economy, but rapid increase in migration to the municipal area placing pressure on existing infrastructure;
- However – national conditions also impact on the municipality – with only moderate growth forecast over the forecast period;
- A key structural weakness can now be identified: as economic growth rates slow, which might have a negative on revenue collection to extract additional revenue for ever-growing needs;
- To pursue and sustain progressive / redistributive / pro-poor policies – it is essential that the economic base expands and critically, job creation (especially at entry-level) accelerates; and
- Over the forecast period – we still see scope for tariff increases (broadly aligned with CPI) and for more progressive tariff structures.

6.10.2 Capital investment

- Stellenbosch embarked on an aggressive capex programme since 2014 – largely funded from own resources;
- As the population continues to increase, the municipality needs to deal with normalising historic settlement patterns to accommodate new migrants and improve access to and mobility within the municipal area;
- Although the total budgeted investment returns to the R350 million p.a. level over the MTREF period, we envisage a moderate growth-rate in capex over the forecast period. This is to ensure capital investment keeps pace with population growth and continues to address backlogs;
- We have introduced a conservative borrowing programme which remains well within the prudential limits;
- More spatial and economic modelling is required for a comprehensive perspective on the long-term corridor development and spatial settlement patterns in the municipal area;
- Significant “high-impact projects” can be modelled to determine long-term financial impact of such projects on the financial position of the municipality; and
- Despite continued use of own resources and a depletion of cash reserves, the liquidity metrics remain positive over the forecast period.

6.10.3 Scenario analysis

- The generic scenario analysis forecast reasonable logical outcomes;
- Two aspects worth noting is the modest differences between the scenarios on total capital expenditure (R4.7 b and R3.5 b in the upside and downside scenarios respectively) and on gearing ratio which is 30.1% and 23.5% for the up- and down side scenarios respectively.



6.11 Projected Financial Statements

Figure 64: Projected Financial Statements

Municipal Financial Model - Stellenbosch Statement of Financial Performance											
Model year	0	1	2	3	4	5	6	7	8	9	10
Financial year (30 June)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
R thousands											
Revenue											
Property rates	309,989	327,692	344,938	363,823	384,930	409,858	437,898	469,140	503,652	541,509	582,725
Service Charges	862,001	938,822	1,015,185	1,093,245	1,178,283	1,264,292	1,359,447	1,457,873	1,561,470	1,674,024	1,796,978
Rental of facilities and equipment	14,992	17,766	18,831	19,961	21,159	22,940	24,886	27,021	29,370	31,962	34,828
Interest earned - external investments	55,110	43,352	39,030	23,172	17,275	19,507	21,574	23,845	26,644	30,349	35,871
Interest earned - outstanding debtors	6,849	10,576	11,264	11,996	12,776	15,323	15,098	16,390	17,822	19,422	21,194
Dividends received	-	-	-	-	-	-	-	-	-	-	-
Fines, penalties and forfeits	114,767	102,132	107,239	112,601	118,231	128,183	139,057	150,988	164,113	178,599	194,613
Licences and permits	6,571	5,092	5,398	5,722	6,065	6,584	7,197	7,905	8,712	9,617	10,620
Agency services	2,365	2,690	2,852	3,023	3,204	3,474	3,769	4,092	4,448	4,840	5,274
Transfers and subsidies (operating)	133,057	144,700	176,317	188,974	203,157	223,010	240,805	260,291	281,692	305,275	331,303
Other revenue	27,070	34,009	36,050	38,213	40,506	43,915	47,641	51,728	56,225	61,188	66,674
Gain on disposal of PPE	91	-	-	-	-	-	-	-	-	-	-
Revaluation on investment property gain / (loss)	-	-	-	-	-	-	-	-	-	-	-
Total revenue before Capital Grants	1,532,862	1,626,831	1,757,104	1,860,729	1,985,587	2,137,088	2,297,371	2,469,276	2,654,147	2,856,785	3,080,082
Capital Grants	77,477	91,804	58,980	68,477	80,586	86,238	90,669	95,674	101,332	107,743	115,002
Public & developers contributions	796	-	-	-	-	-	-	-	-	-	-
Total Revenue after Capital Grants	1,611,135	1,718,635	1,816,084	1,929,206	2,066,173	2,223,326	2,388,040	2,564,950	2,755,479	2,964,528	3,195,084
Operating expenditure											
Employee related costs	444,579	566,808	609,230	655,019	700,861	746,368	795,778	849,481	908,095	972,257	1,042,609
Remuneration of councillors	17,308	18,693	19,814	21,003	22,467	23,708	25,040	26,480	28,042	29,743	31,598
Debt impairment	47,971	123,344	130,735	138,442	146,709	149,862	161,917	174,952	189,133	204,715	221,867
Depreciation and asset impairment	163,948	175,830	189,268	199,705	205,364	211,352	217,624	224,156	230,941	237,967	245,221
Finance charges	18,775	32,922	40,888	46,137	59,042	71,478	83,343	94,582	105,115	115,294	125,671
Bulk purchases	329,682	357,921	384,259	410,738	437,334	463,881	494,086	526,721	562,040	600,419	642,231
Other Materials	-	31,909	33,488	34,504	35,551	39,249	43,357	47,937	53,054	58,788	65,224
Contracted services	123,010	220,297	216,541	224,717	233,202	252,832	274,280	297,813	323,700	352,273	383,860
Transfers and subsidies	6,261	9,102	8,377	8,828	9,303	10,086	10,942	11,881	12,914	14,053	15,314
Other expenditure	85,540	170,316	183,444	186,718	190,752	231,151	242,614	254,911	268,134	282,400	297,823
Loss on disposal of PPE	-	-	-	-	-	-	-	-	-	-	-
Total Expenditure	1,280,280	1,707,142	1,816,044	1,925,810	2,040,383	2,199,968	2,348,982	2,508,914	2,681,167	2,867,910	3,071,417
Suplus/ (Shortfall) for the year	330,856	11,493	40	3,396	25,789	23,358	39,058	56,036	74,312	96,617	123,667



Municipal Financial Model - Stellenbosch
Statement of Financial Position

Model year	0	1	2	3	4	5	6	7	8	9	10
Financial year (30 June)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
R thousands											
Non-current assets:											
Property, plant and equipment	5,151,150	5,507,811	5,795,454	5,949,254	6,106,765	6,269,174	6,436,524	6,608,890	6,786,368	6,969,073	7,157,143
Intangible assets	4,710,275	5,062,486	5,340,880	5,493,480	5,650,991	5,813,400	5,980,750	6,153,116	6,330,594	6,513,299	6,701,369
Investment properties	8,368	8,718	8,868	8,968	8,968	8,968	8,968	8,968	8,968	8,968	8,968
Investments	423,252	425,652	434,652	435,652	435,652	435,652	435,652	435,652	435,652	435,652	435,652
Long-term receivables	—	—	—	—	—	—	—	—	—	—	—
Other non-current assets	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158
	7,095	8,795	8,895	8,995	8,995	8,995	8,995	8,995	8,995	8,995	8,995
Current assets:											
Inventories	920,735	821,219	641,061	575,600	602,296	639,664	667,576	700,485	742,521	803,371	876,556
Trade and other receivables	46,991	73,133	78,452	80,003	81,841	97,788	103,420	109,523	116,156	123,389	131,294
Cash & Short term investments	345,064	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594
	523,680	456,491	271,015	204,002	228,860	250,281	272,562	299,367	334,771	388,387	453,668
TOTAL ASSETS	6,071,884	6,329,029	6,436,515	6,524,854	6,709,061	6,908,838	7,104,100	7,309,375	7,528,889	7,772,444	8,033,699
Municipal Funds:											
Housing development fund & Other Cash Backed Reserves	5,194,083	5,205,576	5,205,615	5,209,012	5,234,801	5,258,159	5,297,217	5,353,253	5,427,565	5,524,183	5,647,850
Reserves (Not Cash Backed)	—	(80,944)	(42,349)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)
Accumulated surplus	—	—	—	—	—	—	—	—	—	—	—
	5,194,083	5,286,520	5,247,964	5,354,464	5,380,253	5,403,611	5,442,669	5,498,705	5,573,017	5,669,635	5,793,302
Non-current liabilities:											
Long-term liabilities (Interest Bearing)	457,152	601,051	688,618	749,681	881,410	1,005,869	1,121,865	1,232,226	1,342,542	1,441,601	1,527,761
Non-current provisions	153,800	284,995	353,652	394,520	504,821	606,606	698,883	783,880	867,785	939,188	996,446
	298,352	316,057	334,966	355,161	376,589	399,263	423,182	448,347	474,757	502,413	531,315
Current liabilities:											
Consumer deposits	420,649	522,402	542,282	566,162	592,851	644,810	685,018	723,896	758,782	806,660	858,088
Provisions	15,674	17,587	20,359	23,336	26,553	29,963	33,621	37,545	41,746	46,263	51,123
Trade and other payables	47,888	50,986	54,270	57,752	61,423	65,285	69,339	73,584	78,021	82,649	87,469
Bank overdraft	342,586	425,571	436,311	445,941	455,176	488,147	507,670	528,171	549,731	572,498	596,568
Current portion of interest bearing liabilities	—	—	—	—	—	—	—	—	—	—	—
	14,502	27,258	31,342	39,133	49,699	61,414	74,387	84,597	89,284	105,249	122,928
TOTAL MUNICIPAL FUNDS AND LIABILITIES	6,071,884	6,329,029	6,436,515	6,524,854	6,709,061	6,908,838	7,104,100	7,309,375	7,528,889	7,772,444	8,033,699



Municipal Financial Model - Stellenbosch
Statement of Financial Position

Model year Financial year (30 June) R thousands	0	1	2	3	4	5	6	7	8	9	10
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Non-current assets:											
Property, plant and equipment	5,151,150	5,507,811	5,795,454	5,949,254	6,106,765	6,269,174	6,436,524	6,608,890	6,786,368	6,969,073	7,157,143
Intangible assets	4,710,275	5,062,486	5,340,880	5,493,480	5,650,391	5,813,400	5,980,750	6,153,116	6,330,594	6,513,299	6,701,369
Investment properties	8,368	8,718	8,868	8,968	8,968	8,968	8,968	8,968	8,968	8,968	8,968
Investments	423,252	425,652	434,652	435,652	435,652	435,652	435,652	435,652	435,652	435,652	435,652
Long-term receivables	—	—	—	—	—	—	—	—	—	—	—
Other non-current assets	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158	2,158
	7,095	8,795	8,895	8,995	8,995	8,995	8,995	8,995	8,995	8,995	8,995
Current assets:											
Inventories	920,735	821,219	641,061	575,600	602,296	639,664	667,576	700,485	742,521	803,371	876,556
Trade and other receivables	46,991	73,133	78,452	80,003	81,841	97,788	103,420	109,523	116,156	123,389	131,294
Cash & Short term investments	345,064	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594	291,594
	528,680	456,491	271,015	204,002	228,860	250,281	272,562	299,367	334,771	388,387	453,668
TOTAL ASSETS	6,071,884	6,329,029	6,436,515	6,524,854	6,709,061	6,908,838	7,104,100	7,309,375	7,528,889	7,772,444	8,033,699
Municipal Funds:											
Housing development fund & Other Cash Backed Reserves	5,194,083	5,205,576	5,205,615	5,209,012	5,234,801	5,258,159	5,297,217	5,353,253	5,427,565	5,524,183	5,647,850
Reserves (Not Cash Backed)	—	(80,944)	(42,349)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)	(145,452)
Accumulated surplus	5,194,083	5,286,520	5,247,964	5,354,464	5,380,253	5,403,611	5,442,669	5,498,705	5,573,017	5,669,635	5,793,302
Non-current liabilities:											
Long-term liabilities (Interest Bearing)	457,152	601,051	688,618	749,681	881,410	1,005,869	1,121,865	1,232,226	1,342,542	1,441,601	1,527,761
Non-current provisions	158,800	284,995	353,652	394,520	504,821	606,606	698,683	783,880	867,785	939,188	996,446
	298,352	316,057	334,966	355,161	376,589	399,263	423,182	448,347	474,757	502,413	531,315
Current liabilities:											
Consumer deposits	420,649	522,402	542,282	566,162	592,851	644,810	685,018	723,896	758,782	806,660	858,088
Provisions	15,674	17,587	20,359	23,336	26,553	29,963	33,621	37,545	41,746	46,263	51,123
Trade and other payables	47,888	50,986	54,270	57,752	61,423	65,285	69,339	73,584	78,021	82,649	87,469
Bank overdraft	342,586	426,571	436,311	445,941	455,176	488,147	507,670	528,171	549,731	572,498	596,568
Current portion of interest bearing liabilities	—	—	—	—	—	—	—	—	—	—	—
	14,502	27,258	31,342	39,133	49,699	61,414	74,387	84,597	89,284	105,249	122,928
TOTAL MUNICIPAL FUNDS AND LIABILITIES	6,071,884	6,329,029	6,436,515	6,524,854	6,709,061	6,908,838	7,104,100	7,309,375	7,528,889	7,772,444	8,033,699

Section 7 Affordability Envelope



7 Affordability Envelope

7.1 Contextualisation

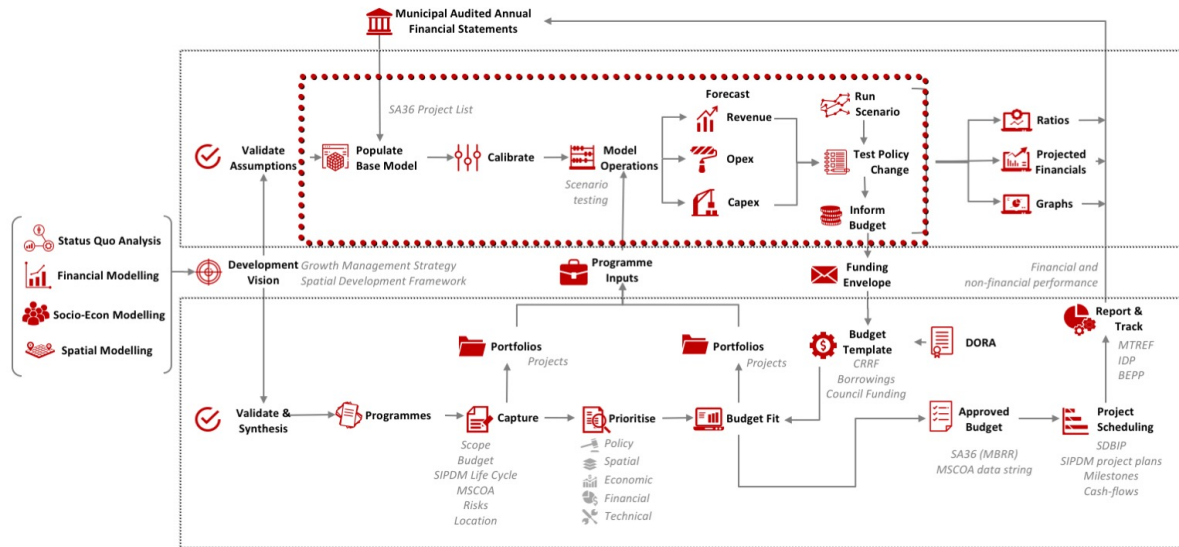


Figure 65: Affordability Envelope in the context of the CEF

The affordability envelope, or otherwise stated, the funding envelope is the result of the Long Term Financial Strategy. The aim of the Long Term Financial Model is to define a set of parameters to which the municipality can roll out capital expenditure projects. The key parameter of interest for the budget scenario process to continue is the total capital expenditure that is deemed as affordable per year.

The purpose of this section is therefore to take the results of the Long Term Financial Strategy and to indicate what should be actively used to guide capital investment through the budget scenario template – better defined as the total available capital expenditure budget per year.

7.2 A Sustainable Funding Mix

The annual funding mix proposed by the model, given the approved budget and optimal forecast thereafter, is illustrated by the graph below.

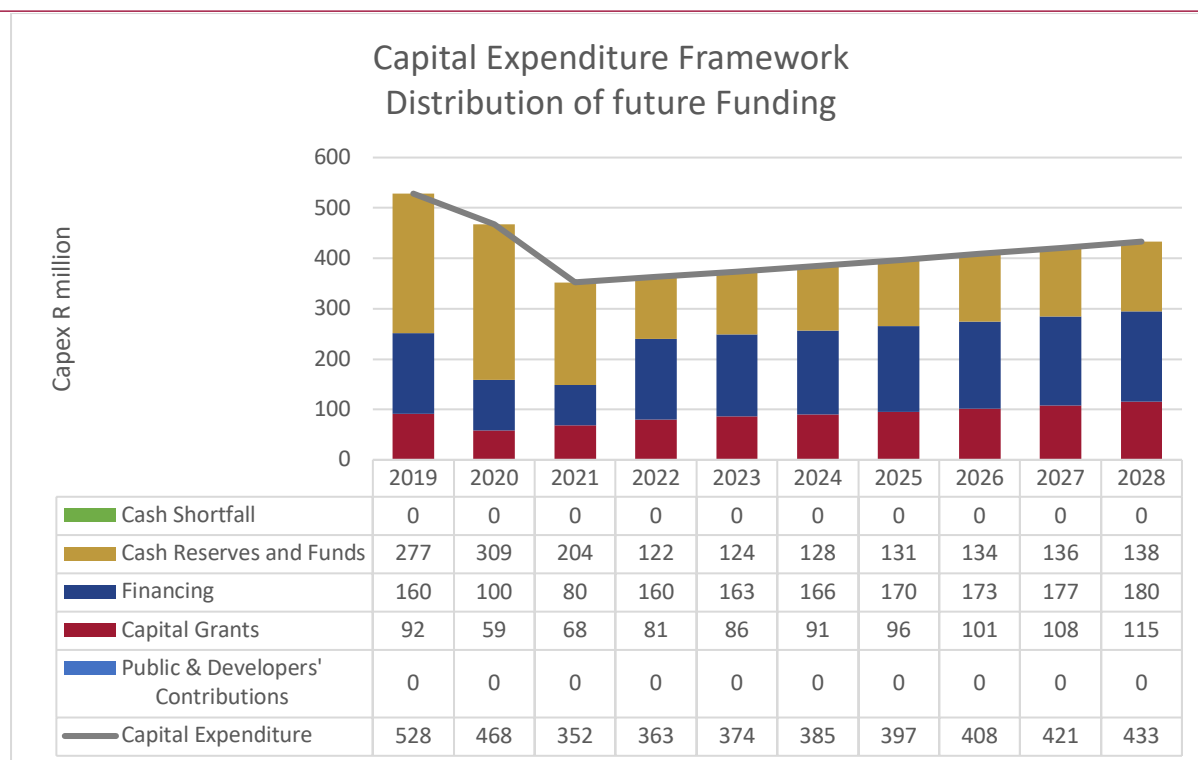


Figure 66: Distribution of Future Funding

7.2.1 Liquidity and Capital Replacement Reserve

For purposes of the projections in this report the minimum required liquidity level caters for unspent conditional grants, reserves, short term provisions, consumer deposits and 1 month's working capital. The municipality exceeds the minimum liquidity requirement over the MTREF-period and throughout the planning period.

Noteworthy though, is the decrease in liquidity over the MTREF period. Sufficient cash remains available to fund capital projects required with further potential for borrowing. The municipal bank balance recovers above the minimum required in later years Capital Expenditure Framework period.

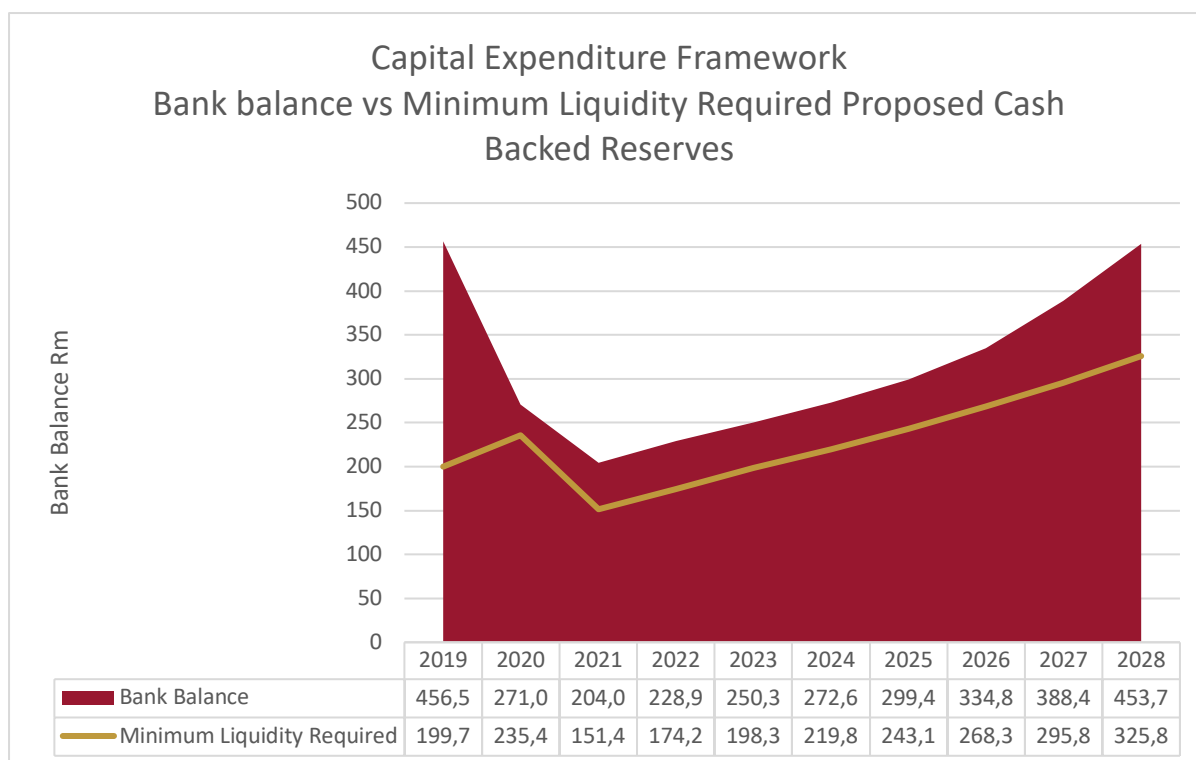


Figure 67: Bank balance vs Minimum Liquidity Required Proposed Cash Backed Reserves

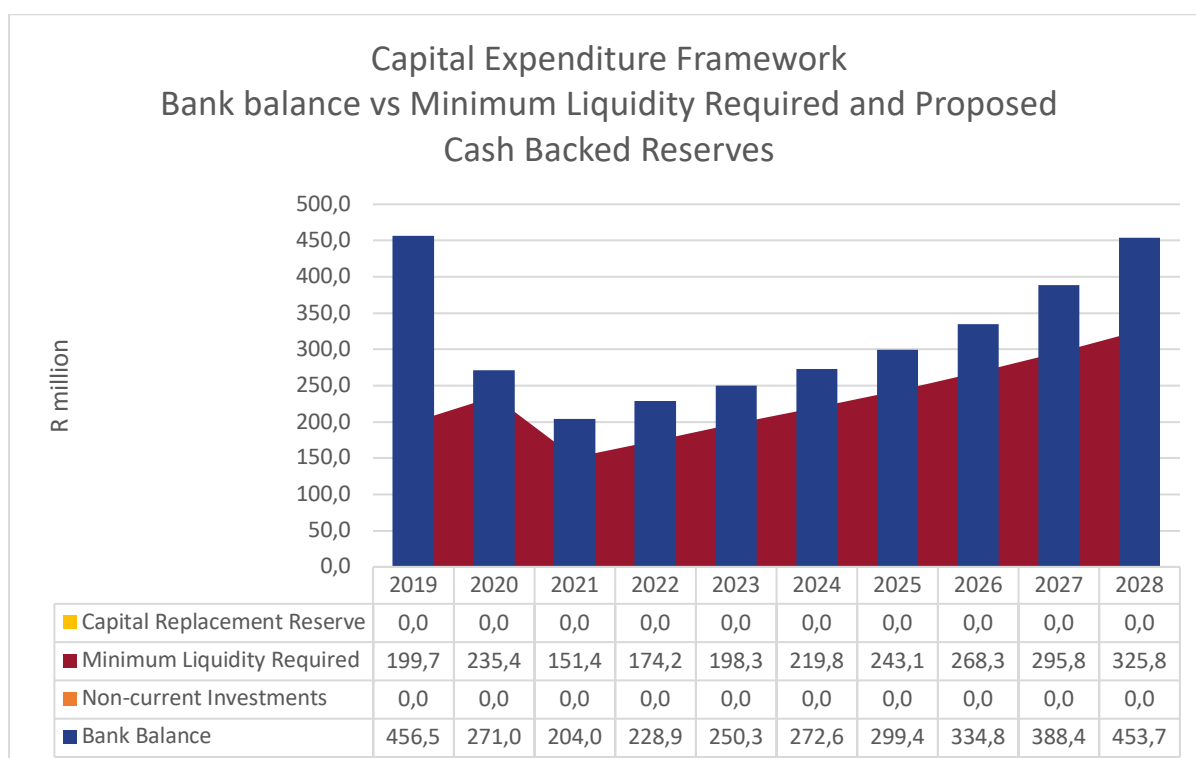


Figure 68: Bank balance vs Minimum Liquidity Required

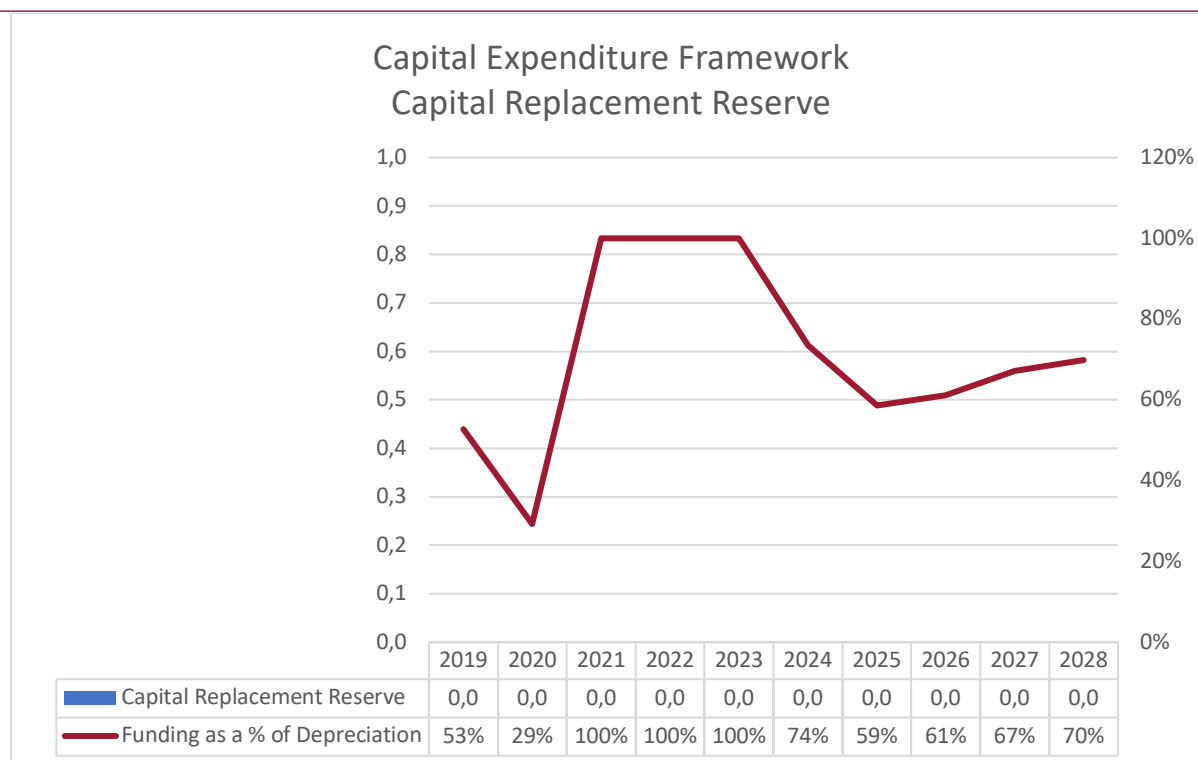


Figure 69: Capital Replacement Reserve

7.2.2 Gearing

The ratio of Long-Term Interest-Bearing Liabilities to Income is illustrated in the graph below.

The Stellenbosch Local Municipality has a debt policy which sets the gearing-level to 35%. The model forecast that gearing increases from 2019 and peaks at 35% during 2028, but never breaches this level. This level of gearing is within both its policy and National Treasury guidelines.

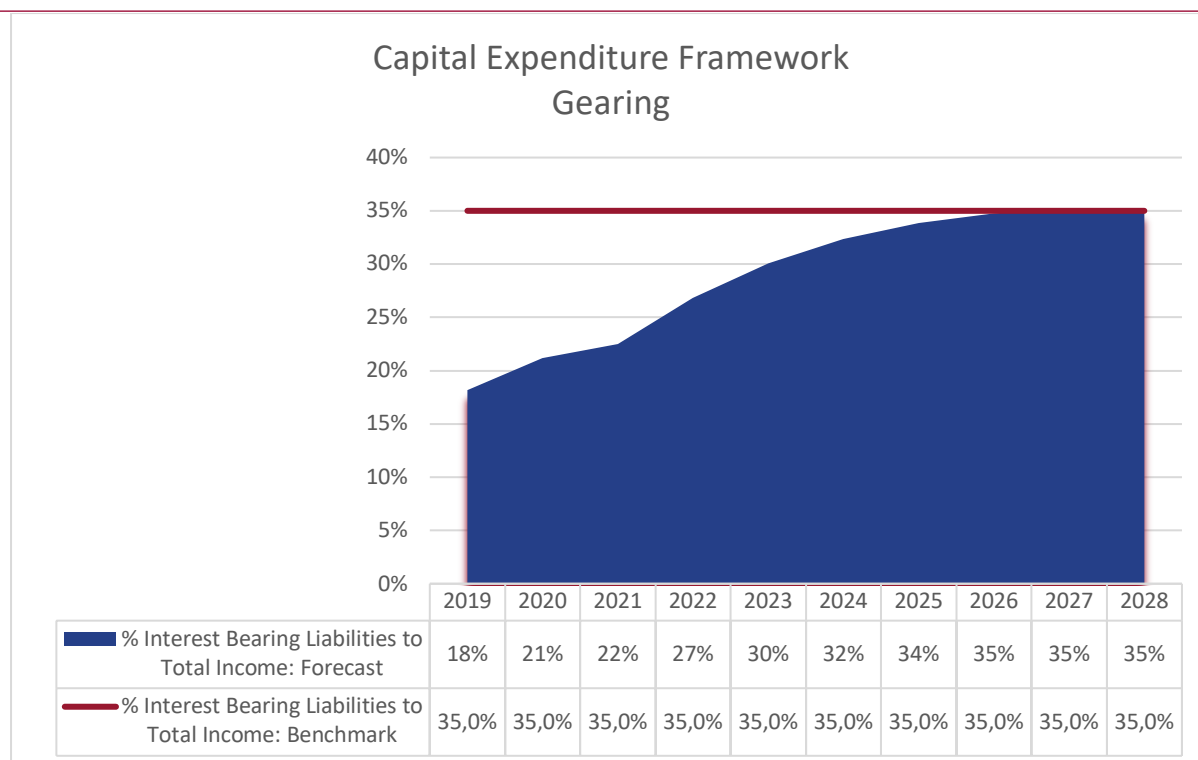


Figure 70: Gearing

Based on the forecast External Financing requirement, the Debt Service to Total Expense Ratio never breaches the 8% benchmark over the planning period.

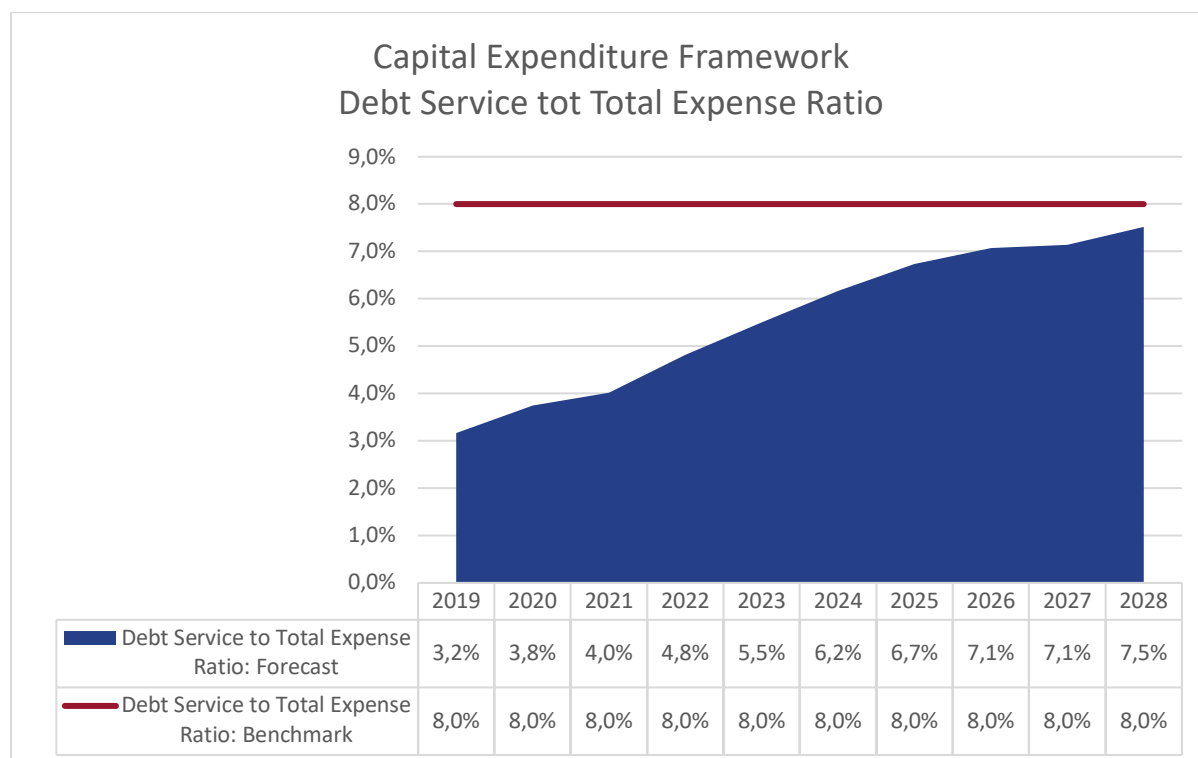


Figure 71: Debt Service tot Total Expense Ratio

The amount of annual external financing is estimated to be distributed as follows:

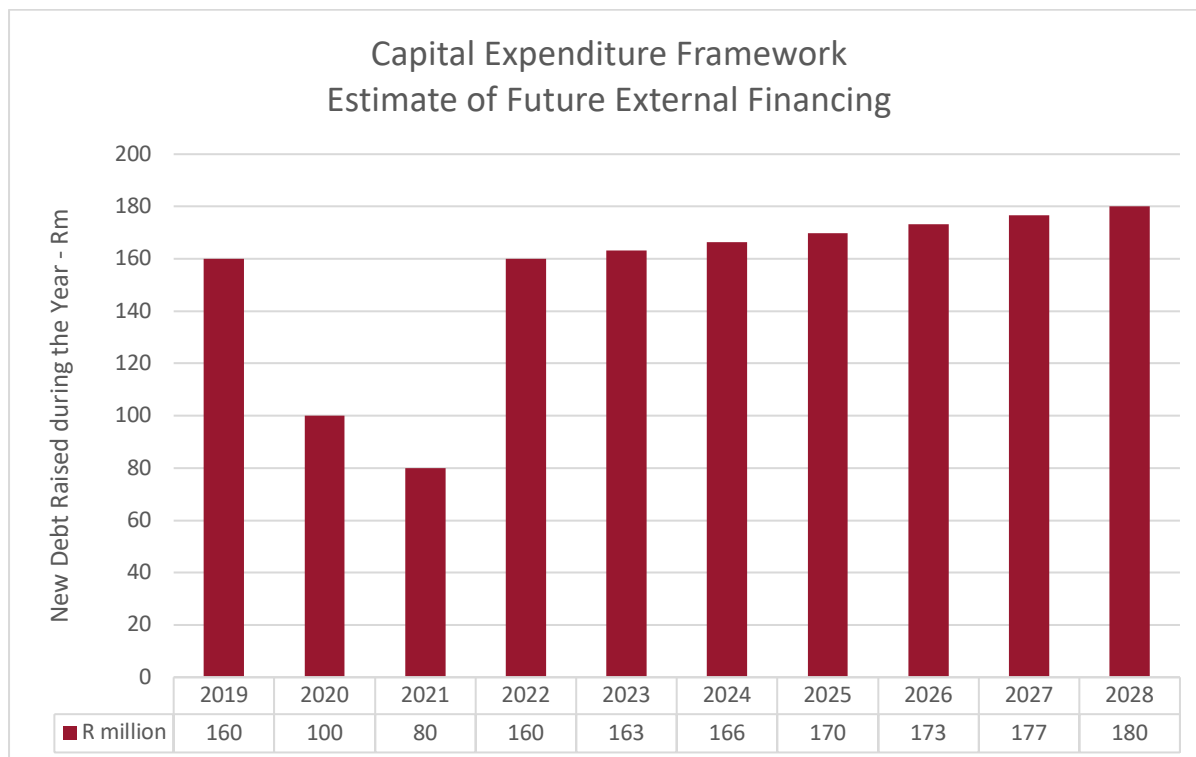


Figure 72: Estimate of Future External Financing

7.2.3 Capital Need and Affordability Envelope by Year

A summary of the capital need and affordability envelope by year is presented in the table below:

Table 73: Capex need

Year	Total Planned Capital Expenditure	Total Planned Capital Expenditure %
2019/2020	R 1 155 145 272	20%
2020/2021	R 959 878 659	17%
2021/2022	R 740 192 900	13%
2022/2023	R 740 017 754	13%
2023/2024	R 433 019 619	8%
2024/2025	R 458 314 256	8%
2025/2026	R 393 318 130	7%
2026/2027	R 419 737 630	7%
2027/2028	R 245 045 909	4%
2028/2029	R 198 933 462	3%
Total	R 5 743 603 591	100%

The table above includes all capital projects captured by departments projected for the 10 year period of the Capital Expenditure Framework.

What the planned capital expenditure analysis illustrates is that:

- Near future is more predictable than the distant future;
- Insufficient demand captured across the ten year horizon;
- In total, the capital demand is equal to R5.7 billion, subject to what is affordable within the financial envelope available.

It is apparent that whilst good progress has been made to plan ahead over a longer period, more careful upfront planning, extension of master plan periods and upfront capturing of pending and approved projects must bear relevance.

Capital expenditure fluctuates annually in line with the needs identified.

Table 74: Affordability Envelope

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Public & Developers' Contributions	0	14	0	0	0	0	0	0	0	0	0
Capital Grants	92	59	68	81	86	91	96	101	108	115	123
Financing	160	100	80	160	163	166	170	173	177	180	184
Cash Reserves and Funds	277	309	204	122	124	128	131	134	136	138	139
Capital Expenditure	528	468	352	363	374	385	397	408	421	433	446

7.2.4 Proposed Amendments to MTREF Capital Programme and Associated Funding Mix

Whereas the current approved MTREF reflect a decrease in capital expenditure until 2021, the total capital spend over the next 10 years come to R4.1 billion, which is affordable to Stellenbosch LM.

The LTFM indicates that should there be a need for Stellenbosch to accelerate the capital spend over the MTREF, but still within an affordable envelope over the next ten years, such an acceleration would be possible with increased external borrowing. This will increase the capital spend over the next ten years to R4.3 billion. Such a scenario was modelled and is presented as part of Annexure A to this report.

Section 8 Project Prioritisation



8 Project Prioritisation

8.1 Contextualisation

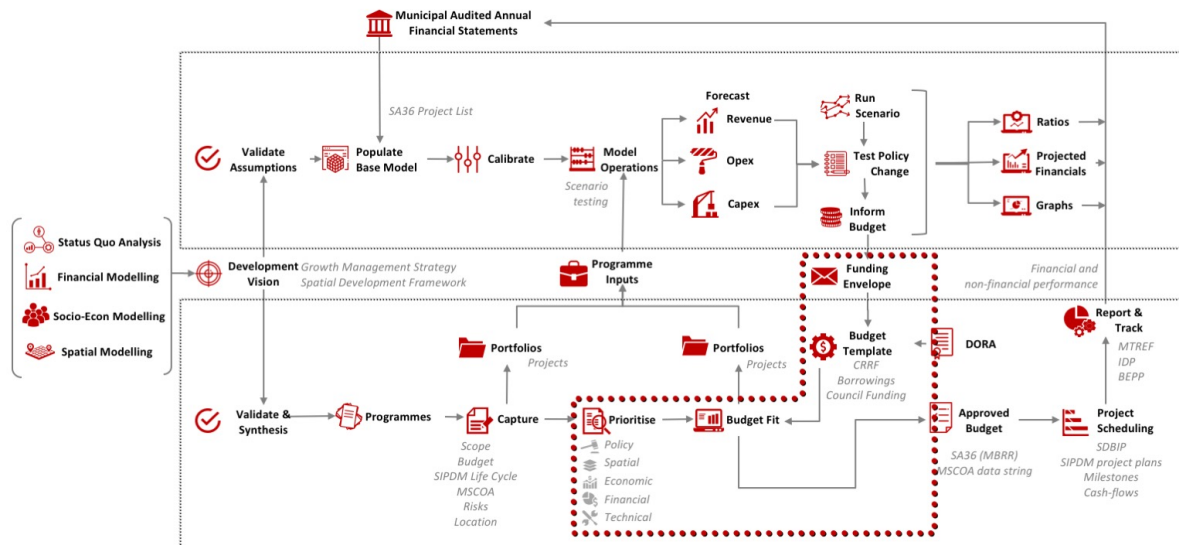


Figure 73: Prioritisation in the context of the CEF

The CP3 Capital Prioritisation Model (CPM) of the municipality is a systematic and objective methodology that provides a way to sort a diverse set of items / projects into an order of importance based on each project's alignment to the strategic, developmental, social, economic, environmental and financial objectives of the municipality. The CPM identifies each project's relative importance by deriving a numerical value representative of the project's priority.

The model provides a means for ranking projects (or project requests) based on criteria that are the most important to focus on first in terms of meeting the Municipality's overarching developmental objectives and strategies. This also assists in promoting co-ordinated and aligned departmental planning and budgeting.

Project prioritisation can therefore be described as a process for assessing a project against a number of variables such as, economic, social, environmental, legislative and financial variables, in order to determine a capital project's alignment with or contribution to such variables. It provides for a systematic and objective assessment of an ongoing or completed project. All the impacts associated with a capital project are identified, and where possible, costs and benefits valued in monetary terms, so as to ensure that project prioritised and selected by government will provide the maximum net benefit to the community, economy and environment – the balancing effect.

8.2 Planning for Priority

In South Africa, the capital expenditure of a municipality should primarily be driven by the IDP. SPLUMA,³¹ as explained in the introduction of this document, furthermore compels local authorities to formulate a Capital Expenditure Framework (CEF). The meaningful allocation of capital expenditure for municipalities is however a challenging balancing act that must seek to address:

- Infrastructure backlogs;

³¹ Spatial Planning and Land Use Management Act, Act 16 of 2013 section 21 (n).

- The restoration of human dignity;
- The creation of a safe and secure environment;
- The provision of basic services;
- The maintenance of existing assets;
- The protection of our heritage and environment;
- The creation of sustainable job opportunities;
- The boosting and creation of economic activities/opportunities; and
- Strategically investing into a growing, sustainable, liveable and globally competitive city environment.

A prioritisation methodology is therefore required that will consider qualitative, quantitative and spatial priorities as articulated by municipality's strategic as well as technical leadership, and as enshrined by municipality's various strategic plans. It is recognised that the planning environment is continuously changing in response to new challenges and new dynamics are introduced constantly due to a variety of reasons. The process of prioritisation therefore, must possess of the ability to comprehensively on-board new issues for consideration and easily, and most importantly transparently, bring on board and change to the changing needs of the municipality.

The need for a mechanism to drive the strategic, yet equitable, allocation of capital within the city, stems from the following realities:³²

- Urbanisation, immigration and growth: "The State of South African Cities" report produced by Cities Support Network in 2016, report that South African Cities are inundated by rapid urbanisation. A significant number of the population within South African Municipalities has low levels of education resulting in high unemployment, very low incomes and poor living standards. There are not enough job opportunities for unskilled labourers in the economy to address this issue adequately. Because of this urbanisation, Municipalities must deal with a relentless demand for infrastructure and services. Unconstrained urbanization and population growth have resulted in the demand for infrastructure and services outstripping the financial resources of Municipalities. Given the limited resources to address these needs, prioritization of capital expenditure has become a factor of critical importance. Typical prioritisation metrics used in this regard includes the consideration of a project with respect to the Urban Edge.
- The importance of the city and regional economy: One of the main drivers of economic sustainability is the creation of job-opportunities. Affecting economic changes requires a multi-pronged approach involving a range of interventions across a number of industries. From a capital expenditure perspective though, the process of prioritisation can benefit from the sophistication of a complex, macro-economic econometric model. Typical prioritisation metrics used in this regard includes Job creation (opportunities - per R1m capex).
- Increasing maintenance burden: Municipalities are faced with the conundrum of balancing spatial, social and economic transformation, whilst maintaining the existing asset base of the city. Spatial, social and economic transformation is often associated with the provision of new, quality

³² For more information on how the realities are addressed in the prioritisation process, please refer to the annexure that unpacks the prioritisation model.

infrastructure in support of liveable communities either in newly demarcated development areas or as part of upgrading severely marginalized communities, with a poor service provision history and a backlog of service delivery demands. A balanced approach to capital spending, focusing partially on the provision of new infrastructure, whilst maintaining the existing asset base and revenue stream is important. A fundamental consideration of all capital expenditure therefore must include the estimated operating expenditure burden that will result from the capital that is being spent. The operating expenditure burden is inevitable – a situation can however arise whereby the operating expenditure continues to grow to the extent that it starts to impact on the available capital expenditure. Typical prioritisation metrics used in this regard is the lifespan of a specific asset.

- **Coordination and Inter-dependency:** Capital project preparation is often undertaken in a non-integrated way in that the different departments, divisions and agencies plan and budget for capital projects in isolation from each other. This is not necessarily intended, it is simply a consequence of a large, multi-disciplinary organisation. Departments often have their own priorities and their own methods of determining such priorities. These methods vary in terms of sophistication and detail. The provision of municipal infrastructure requires integrated project planning and preparation. Therefore, a decision support system, which facilitates the coordination and integration between planning and infrastructure provision on a project preparation as well as an institutional level is critical.
- **Competing Interests:** Although basic services infrastructure (i.e. water, sanitation, electricity and solid waste management) is often as high on the community delivery agenda as social facilities and amenities (i.e. clinics, libraries, community facilities etc.), these different infrastructure types do not always receive equitable capital allocation. Often, income generating capital expenditure (i.e. capital spent on infrastructure which can yield some form of monetary return) receives larger quantities of capital budget than non-income generating infrastructure. A decision support system, which allows for scenario testing in relation to the ratio of income generating and non-income generating capital expenditure, taking into account the impact that this would have on the city's financial sustainability is required.
- **Spatial transformation agenda:** The spatial vision of South African Municipalities seeks to transform the developmental landscape to become a more inclusive, efficient and equitable. Consequently, capital spending should be earmarked to drive the spatial transformation agenda which in turn will result in a spatially transformed and economically sustainable city structure. A decision support system, which enables capital project prioritisation, reporting and tracking quantitatively, qualitatively and spatially, is required to ensure that capital spending is focused on strategic spatial structuring areas to achieve the desired city spatial form. Typical prioritisation metrics used in this regard is the spatial consideration of the SDF.

The complexity and interdependency of these issues is very challenging, and each year, new considerations and priorities are introduced. The need for a system that assist in the facilitation of such a process, together with additional benefits of record-keeping, tracking and reporting is therefore evident.

The prioritisation process facilitated by a system, should be easy to understand and interpret whilst allowing for accessibility and input by its users on any level of detail required. Given the diverse range of different departments and divisions within the typical South African municipality and the divergent needs stemming from each department, it is essential that the prioritization methodology lends itself towards participation and allows for easy calibration by key decision makers.

In the process of prioritization, the importance of a multitude of considerations must be emphasized. Although it is commonly accepted that the municipality's IDP should be the primary driver of priorities, there are however many other metrics that should be considered in the process. Some of these considerations are briefly highlighted.

The first fundamental to consider is funding that is available for implementation and how this capital is sourced. This informs of the affordability of implementing the list of capital needs. In a municipal environment, capital is sourced from a number of places. Among these sources are bonds and loans. The affordability and the debt thresholds set by the MFMA are important considerations in this process.

Technical inputs stemming from the municipality's asset management system or from other technical reports or processes represent another important aspect to consider in the process of prioritization. These technical inputs often do not align optimally with IDP objectives but are important all the same due to age, wear or other important reasons. Other technical aspects such as the technical interdependence of projects also play an important role. This will have the consequence that projects that appear to be of a lower priority, may be elevated in importance if they are enablers of other, important projects.

The economic, socio-economic and environmental impacts also represent impact lenses that casts an important perspective on project impacts. There are various methods and models to determine these impacts to varying degrees of accuracy. Within a service delivery framework, it is essential that these elements be included in the prioritization process.

Lastly and very importantly, the spatial alignment of a project to a municipality's strategic or political objectives needs to be included in prioritization process. The assumption is often erroneously made that these spatial aspects are adequately captured by the IDP process. The reality is however more complex and dynamic. Spatial priorities are often revealed throughout the IDP cycle by new processes such as the development of Spatial Development Frameworks (SDFs).

8.3 Capital Prioritisation Model Mathematical Framework

The prioritisation process should be easy to understand and interpret whilst allowing for accessibility and input by its users on any level of detail required. Given the diverse range of different departments and divisions within the municipality and the divergent needs stemming from each, it was deemed essential that the methodology lends itself towards participation and allows for easy calibration by key decision makers.

To fully take into account all factors relevant in deciding which projects to receive priority, the utility analysis method is used that takes all the relevant system constraints into account.

"Utility analysis is in effect a semi-quantitative means of 'trading off' the effects of implementing any given scheme, that is, the relative desirability of achieving a given set of goals and objectives and the degree to which this target system is fulfilled, are combined to give a measure of how far each scheme will go in meeting all or any of the goals and objectives, and so provides the answer to the question of effectiveness of the scheme. The distinguishing feature of utility analysis is that it can handle financial, quantitative and qualitative effects simultaneously. Consequently, all of the impacts or effects of a project which can be envisaged can be included in the analysis."

Evaluation of Transportation Projects – Utility Analysis; JV Baxa; January 1981; CSIR

A utility analysis provides a structured input for the decision-maker. It provides an indication to the overall effectiveness with which alternatives will satisfy the complex target system. The process begins

by defining the problem in a structured way. As already mentioned, the problem definition can incorporate diverse inputs which covers quantitative, qualitative and financial factors. Firstly, certain goals that should ultimately be addressed, must be established. For each of these goals, relevant objectives then must be established. Each objective requires a specific input, which will be modelled based on a predetermined method or value function, to provide an output. The following basic steps apply:

- Define the relative preferences for each goal that was set out;
- Define relative preferences for each objective that was set out; and
- Weight each criterion that was set up to reflect their relative importance.

By following these steps, each alternative can be ‘scored’ to attain a measurement of performance that can be translated into a number of points. The points system with which each criterion is weighted, as indicated on the matrix of utilities, is a number between 0 and 100.

The complexity of the number of issues that had to be taken into account in the model from the municipality’s point of view, required that the model methodology had to be adapted to allow for more than one level of “objectives”. Importantly, these objectives all contribute towards a fundamental set of goals. These goals possess of the ability to influence the way in which projects will be rated rather dramatically. The benefit of this is that the municipality now has the ability to fix the fundamental considerations on this level, to ensure that it manifests in prudent financial management whilst still ensuring that the transformation as contained in the various municipal strategies, manifests itself at this level.

The figure below shows the basic structure of the model. More about the actual criteria that will be used is discussed later in this document.

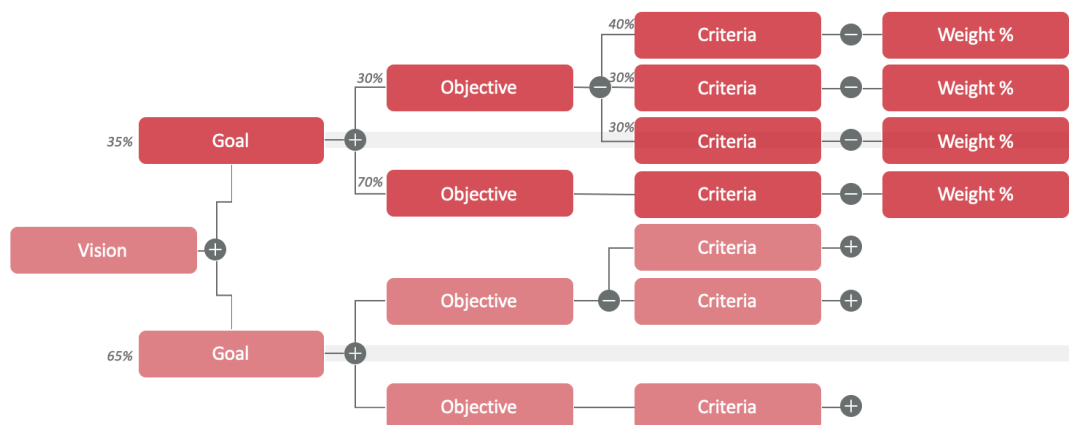


Figure 74: CP3 Capital Prioritisation Model (CPM) Mathematical Framework

The application of this methodology in CP3 had to find a balance between complexity and simplicity. This is required to ensure participation in the process by a very broad range of departments and divisions within departments. Not all departments are technically focussed to the same level of

sophistication – as is the case with the infrastructure departments. It is therefore necessary to find criteria and measurements that do not exclude such department.

This approach offers a significant advantage in that the “principles” of prioritisation becomes important debating points, instead of individual merits projects. Projects emanating from different departments do not have “common ground” to enable a meaningful one-to-one comparison. Using this model though, provides a platform where all projects, irrespective of their origin or sophistication, is subjected to the same principles.

8.4 Capital Prioritisation Model High Level Structure

The following part of this document will show how the prioritisation model works. It should be noted that this part of this section will start at the high level model structure, followed by a detailed layout of how each branch of the multi criteria decision making tool is used to evaluate projects.

The following figure displays a typical Prioritisation for Stellenbosch, as developed in CP3.

Figure 75: Screenshot of the prioritisation model that is used.



The CPM allows for projects to be ranked or scored between two mutually exclusive branches, namely:

- Model;
- Housing Outside Urban Edge.

The “Model” allows for projects to be ranked or scored between two mutually exclusive branches, namely:

- Spatially Mapped;

- City Wide; or
- Administrative Head Quarters.

These two model branches are mutually exclusive, which means that any project can only pass through one of the two branches and can never be scored on both branches. Projects which have spatial locations (i.e. works and affected areas) are evaluated through the “Spatially Mapped” branch of the model, whereas unmapped projects marked under the MSCOA regional segment as “City Wide” or “Admin HQ” are evaluated through the “City Wide / Admin HQ” branch of the model. This distinction is made so that City Wide and Admin HQ projects are not artificially penalised under the “Spatial” branch of the prioritisation model.

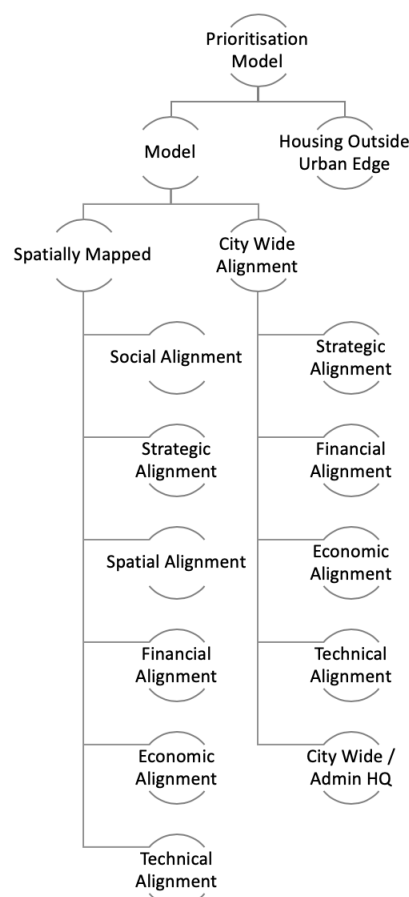


Figure 76: Capital Prioritisation Model High level Structure

Once it has been determined whether a project is **spatially mapped**, the project evaluation takes place according to the following themes or goals:

- Social alignment;
- Strategic alignment;
- Spatial alignment;
- Financial alignment;
- Economic alignment; and

- Technical alignment.

Once it has been determined whether a project is **city wide or Admin HQ**, the project evaluation takes place according to the following themes or goals:

- Social alignment;
- Strategic alignment;
- Financial alignment;
- Economic alignment; and
- Technical alignment.

It is evident from the high-level tree structure above that the “Spatial alignment” theme is only utilised under the “Spatially Mapped” scorecard.

The “Housing Outside Urban Edge” branch excludes all housing projects that are partially or totally outside the Urban Edge of Stellenbosch.

8.5 Capital Prioritisation Model Detailed Criteria

The following sections should be read in conjunction with Annexure 4: Prioritisation model. The annexure provides a more detailed description for each scoring criteria, whereas this section provides an overview of the scoring criteria branches.

The capital prioritisation model criteria will be discussed in more detail under the five (5) themes of the model, namely:

- Strategic alignment;
- Spatial alignment;
- Financial alignment;
- Economic alignment;
- Social alignment; and
- Technical alignment.

8.5.1 Strategic Alignment

The strategic alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the organisations developmental objectives as well

as strategic outcomes set out in the strategic guiding document of the municipality. The policy alignment score is calculated within five distinct categories³³, namely:

- IDP Outcome 1: Valley of Possibility;
- IDP Outcome 2: Dignified Living;
- IDP Outcome 3: Good Governance and Compliance;
- IDP Outcome 4: Green and Sustainable Valley; and
- IDP Outcome 5: Safe Valley.

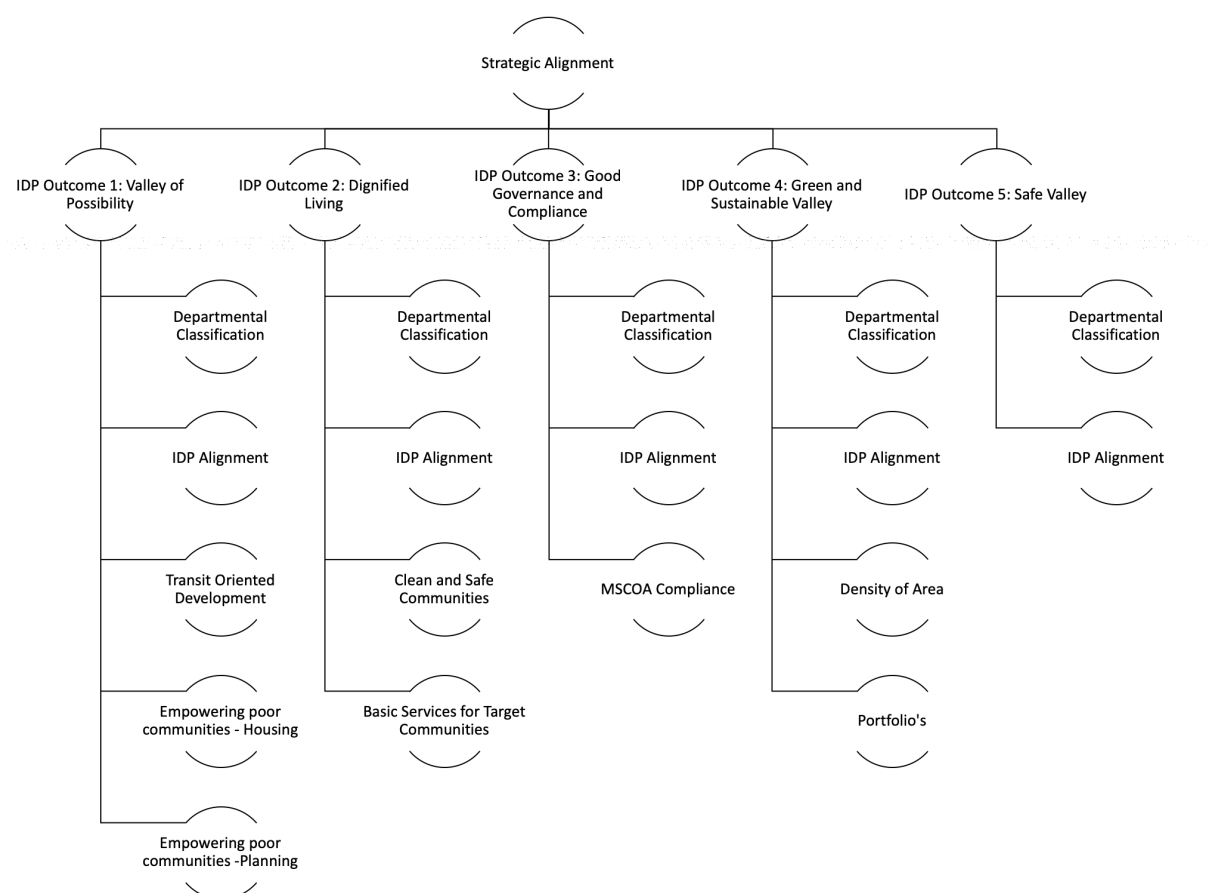


Figure 77: Capital Prioritisation Model: Strategic Alignment

³³ These categories are aligned with the IDP Outcomes.

8.5.2 Spatial Alignment

The spatial alignment goal or theme of the prioritisation model evaluates the degree to which projects aligns with the spatial development framework and other spatial targeting objectives set out in various strategic documents of the municipality (i.e. IDP, SDF, CIF etc.). The alignment of projects to the spatial targeting areas of the municipality are scored according to the following criteria:

- Spatial Development Framework; and
- Inside Urban Edge.

These criteria measured under these sub-branches seek to ensure that projects within the municipal budget align with the spatial structure or spatial development objectives of the municipality.

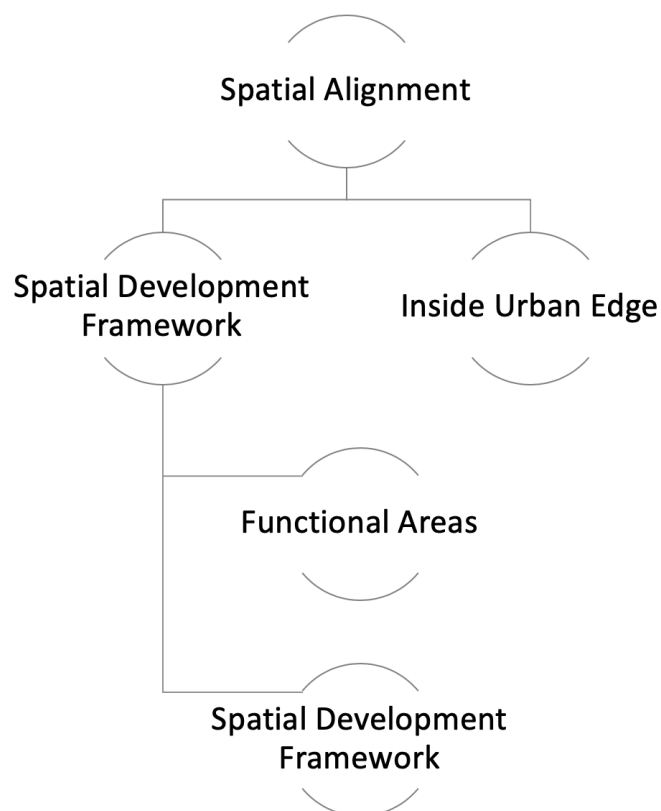


Figure 78: Capital Prioritisation Model: Spatial Alignment

8.5.3 Financial Alignment

The financial alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget are considered to be credible, affordable, funded, applied to expand the rateable asset base and improving the fiscal position of the municipality. The financial alignment score is calculated within six distinct categories, namely:

- Fiscal deficit as % of GDP;
- Affordability;
- Confidence in Cost Estimate;
- Co-Funding;
- Lifespan of asset; and
- Opex Consequence.

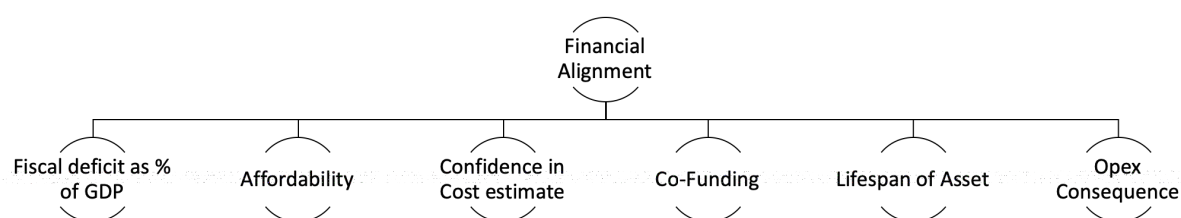


Figure 79: Capital Prioritisation Model Financial Alignment

8.5.4 Economic Alignment

The economic alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget contributes to the growth of the municipal economy and improves the economic position of the residents within the municipality.

A macro-economic impact model (EIM) was developed for the municipality specifically to make use of the data from the CP3 system. The econometric model is specific for the municipality and draws from a sophisticated range of financial data, regional data, and population data sourced from STATSSA. As such, the EIM generates values for the impact of individual and portfolio capital projects in terms of a set of economic, socio-economic and fiscal indicators – for the City as a whole, as well as a selection of key sub-regions or ‘main places’.

The EIM is based on the outputs of a comprehensive suite of econometric models. The workings of the EIM are dynamic and consider the indirect City-wide impacts of projects and programmes – not only the localised ward-specific impact.

The EIM therefore captures the iterative, dynamic impacts of all of the role-players within the economy – households, business, government, foreign sector, as well as the full economic flow of goods, services, factors and money is accounted for, and an iterative computational process is utilised.

The outputs from the economic model is further augmented spatially by evaluating the alignment of the project’s location and affected area, with geographic areas that were graded across the entire municipal area in terms of its economic impact in a separate economic study that was conducted for this purpose.

The economic alignment score is calculated within two distinct categories, namely:

- Focus on targeted portfolios;
- Focus on impact; and
- Focus on people.

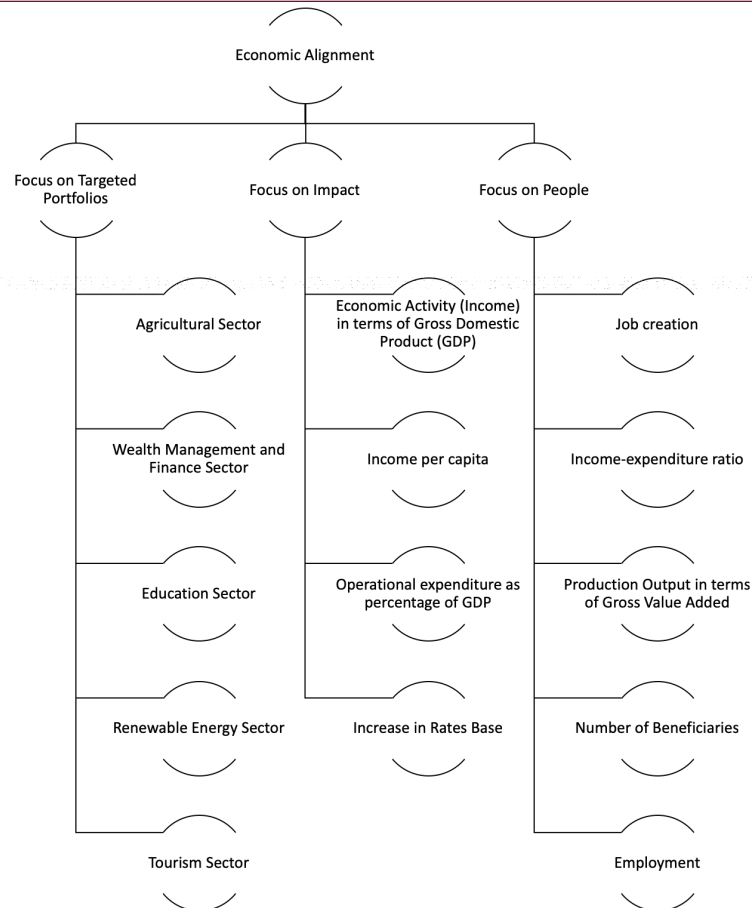


Figure 80: Capital Prioritisation Model: Economic Alignment

8.5.5 Social Alignment

The social alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipality aligns with servicing of areas with the highest demand and where the most vulnerable communities are situated.

The social alignment score is calculated within two distinct categories, namely:

- Services; and
- Deprivation Index.

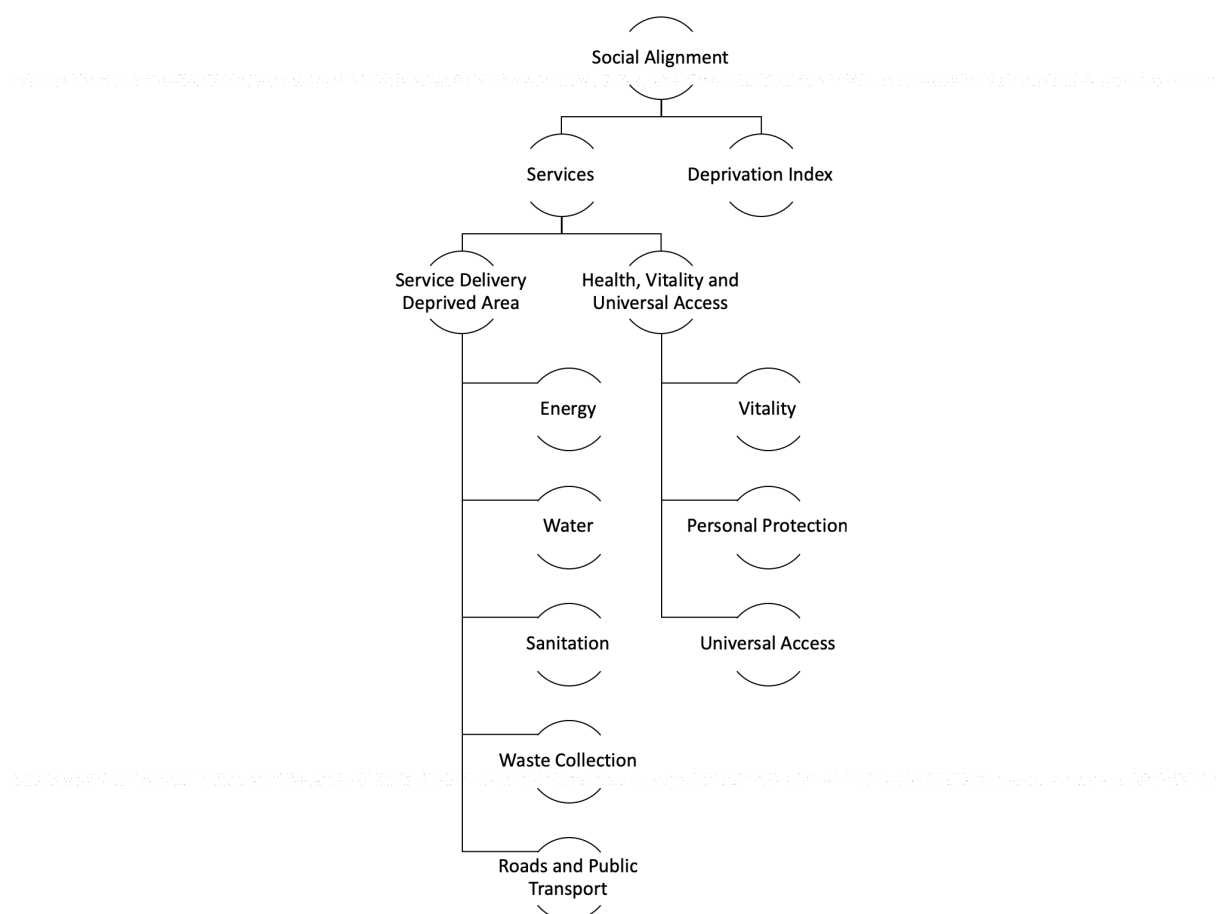


Figure 81: Capital Prioritisation Model: Social Alignment

8.5.6 Technical Alignment

The technical alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the asset management plans, analysis and modelling of the technical or utility services departments as well as the sustainability goals of the municipality, and most importantly, whether the project is ready to be implemented (i.e. all statutory and governance requirements have been met).

The technical alignment score is calculated within four distinct categories, namely:

- Implementation readiness;
- Risk Rating;
- Departmental Rating; and
- Legally Bound.

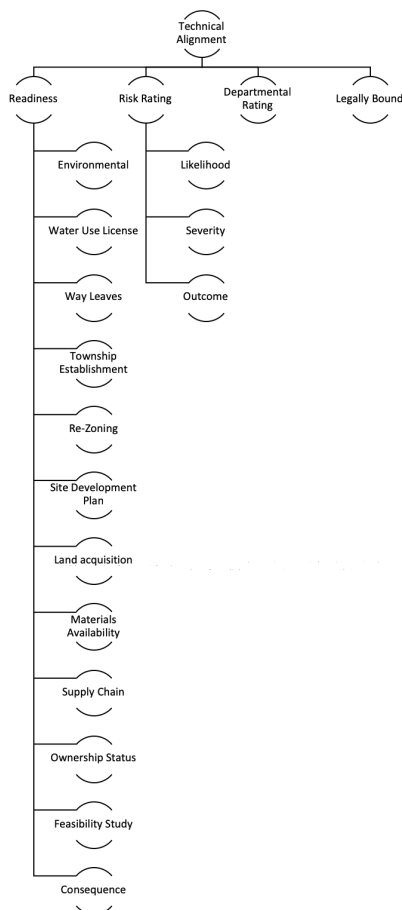


Figure 82: Capital Prioritisation Model: Technical Alignment

8.6 Capital Prioritisation Model Results

Based on the information captured on CP3, the Capital Prioritisation Model (CPM) has been run. The relative ranking which will contribute during the budget scenario routine are discussed in detail in the next sub section.

8.6.1 Scores per Unit

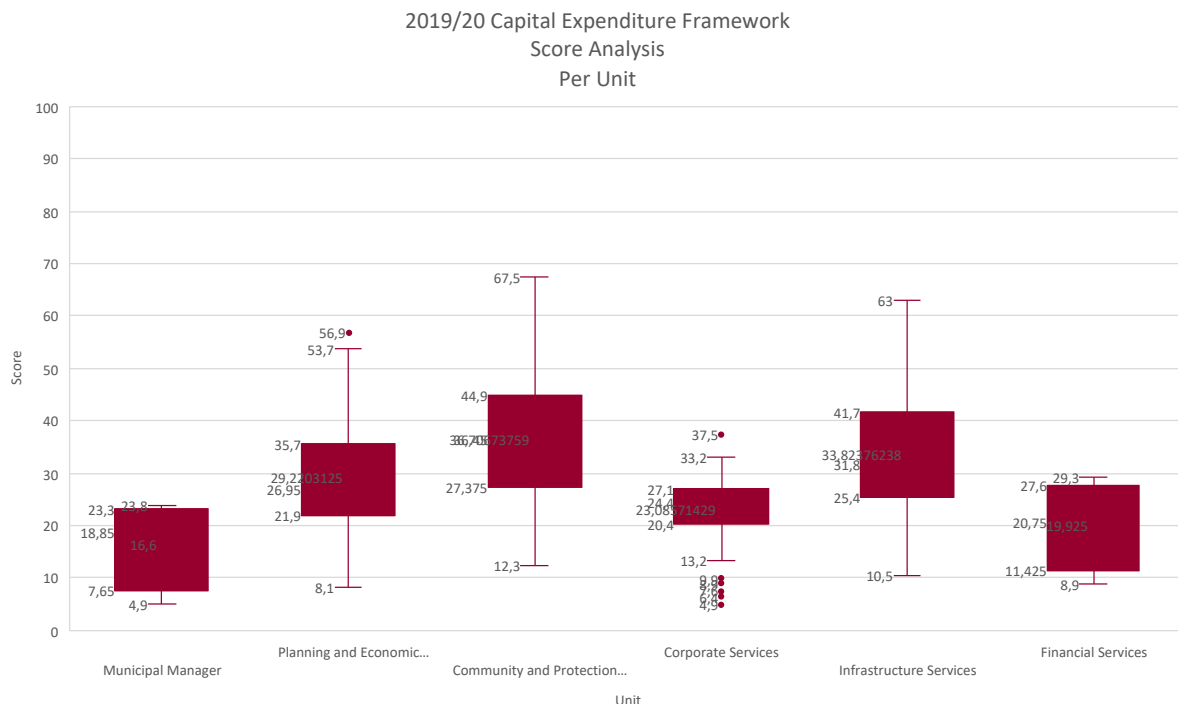


Figure 83: Prioritisation model results – score per unit

A box and whisker diagram is used to summarise a range of results per a unit. The box component of the diagram shows where the projects that scored between the 25th and 75th percentile scored of the specific unit. The average score of the unit is depicted by the “x”. the ends of the whiskers are the maximum and minimum scores. Projects scoring between the minimum value and the 25th percentile are arranged along the bottom whisker, and projects scoring between the maximum value and the 75th percentile are arranged along the top whisker and the box.

The figure above shows that Community and Protection services, and Infrastructure services has the highest variability of project scores for the majority of their projects. The municipal Manager and the Finance service units, scores relatively lower, but most of the projects within the units score close to the maximum value achieved within the department.

Planning and Economic Development, as well as Corporate Services displays the best spread of projects. The project with the best score is situated in the Infrastructure Services unit, whereas the project with the lowest score is situated in Corporate services.

8.6.2 Scores per Department

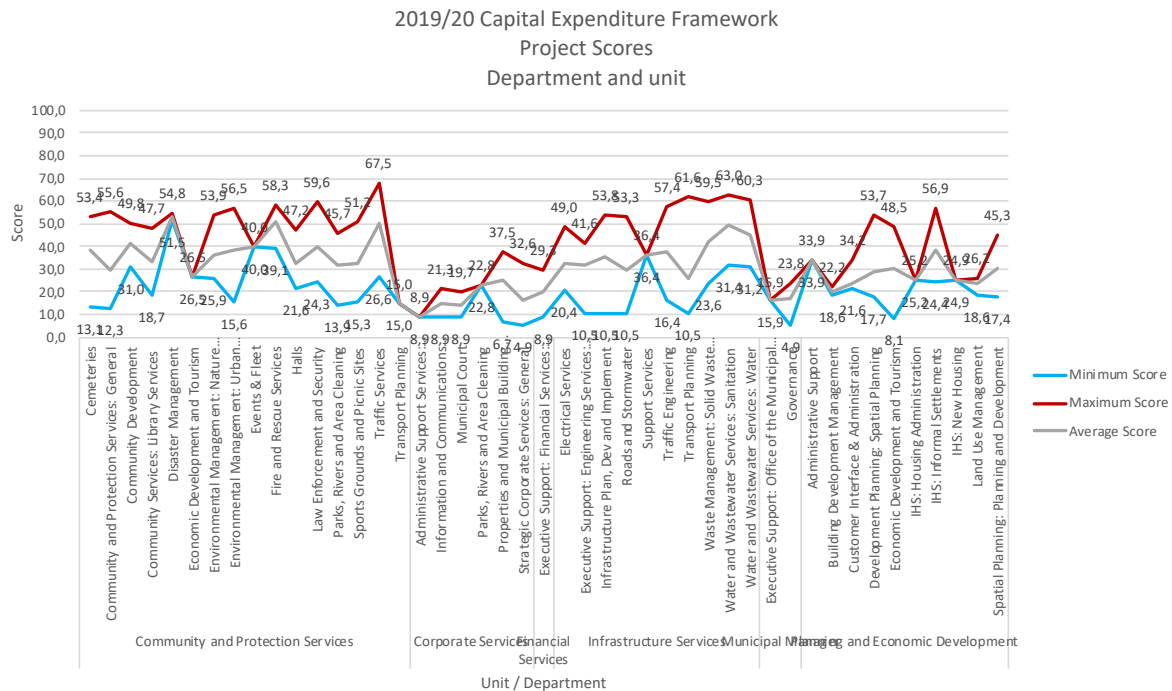


Figure 84: Prioritisation model results – Score per department

Table 75: Prioritisation model results

Unit / Department	Minimum Score	Maximum Score	Average Score
Community and Protection Services	12,3	67,5	36,7
Cemeteries	13,1	53,4	38,0
Community and Protection Services: General	12,3	55,6	29,6
Community Development	31,0	49,8	41,4
Community Services: Library Services	18,7	47,7	33,5
Disaster Management	51,5	54,8	53,1
Economic Development and Tourism	26,5	26,5	26,5
Environmental Management: Nature Conservation	25,9	53,9	35,8
Environmental Management: Urban Greening	15,6	56,5	38,6
Events & Fleet	40,0	40,0	40,0
Fire and Rescue Services	39,1	58,3	50,6
Halls	21,6	47,2	32,5
Law Enforcement and Security	24,3	59,6	39,9
Parks, Rivers and Area Cleaning	13,9	45,7	31,5
Sports Grounds and Picnic Sites	15,3	51,2	32,5
Traffic Services	26,6	67,5	50,5
Transport Planning	15,0	15,0	15,0
Corporate Services	4,9	37,5	23,1
Administrative Support Services: Communications	8,9	8,9	8,9
Information and Communications Technology (ICT)	8,9	21,3	14,5
Municipal Court	8,9	19,7	14,3
Parks, Rivers and Area Cleaning	22,8	22,8	22,8
Properties and Municipal Building Maintenance	6,7	37,5	25,0
Strategic Corporate Services: General	4,9	32,6	16,6
Financial Services	8,9	29,3	19,9
Executive Support: Financial Services: General	8,9	29,3	19,9
Infrastructure Services	10,5	63,0	33,8
Electrical Services	20,4	49,0	32,7
Executive Support: Engineering Services: General	10,5	41,6	32,1
Infrastructure Plan, Dev and Implement	10,5	53,8	35,6
Roads and Stormwater	10,5	53,3	29,7

Unit / Department	Minimum Score	Maximum Score	Average Score
Support Services	36,4	36,4	36,4
Traffic Engineering	16,4	57,4	37,3
Transport Planning	10,5	61,6	26,1
Waste Management: Solid Waste Management	23,6	59,5	42,2
Water and Wastewater Services: Sanitation	31,4	63,0	49,6
Water and Wastewater Services: Water	31,2	60,3	45,1
Municipal Manager	4,9	23,8	16,6
Executive Support: Office of the Municipal Manager	15,9	15,9	15,9
Governance	4,9	23,8	16,8
Planning and Economic Development	8,1	56,9	29,2
Administrative Support	33,9	33,9	33,9
Building Development Management	18,6	22,2	19,8
Customer Interface & Administration	21,6	34,2	24,0
Development Planning: Spatial Planning	17,7	53,7	28,8
Economic Development and Tourism	8,1	48,5	30,6
IHS: Housing Administration	25,2	25,2	25,2
IHS: Informal Settlements	24,4	56,9	38,5
IHS: New Housing	24,9	24,9	24,9
Land Use Management	18,6	26,2	23,3
Spatial Planning: Planning and Development	17,4	45,3	29,9
Grand Total	4,9	67,5	32,9

8.6.3 Scores Distribution

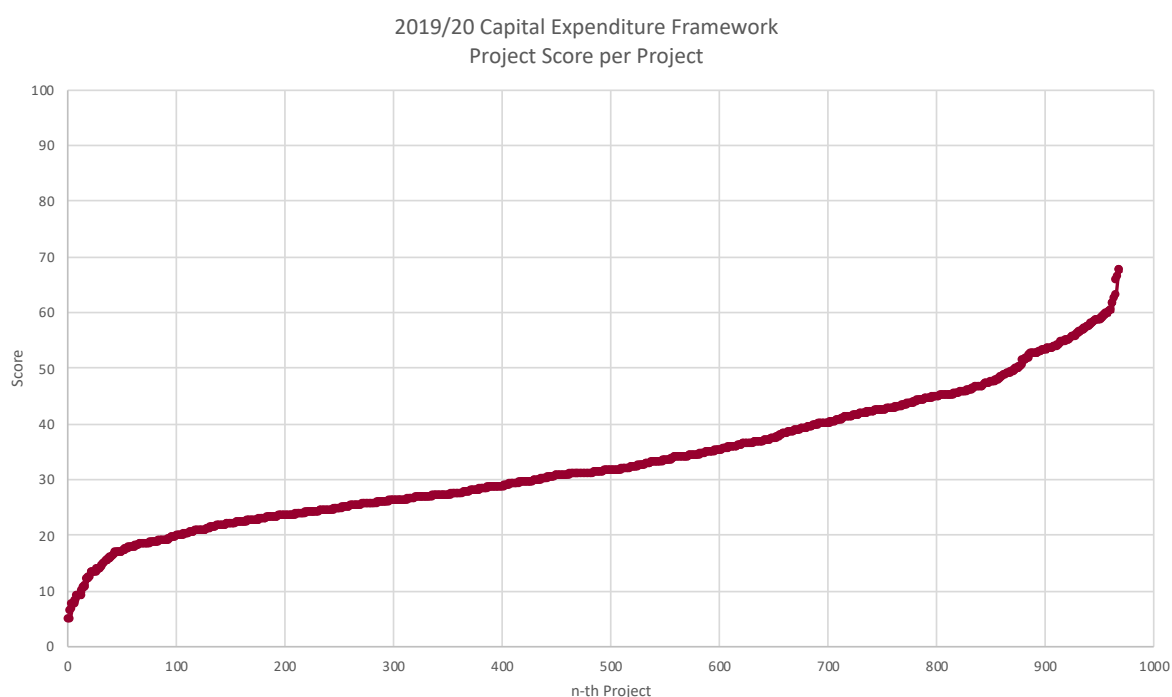


Figure 85: Project Score Distribution – per score

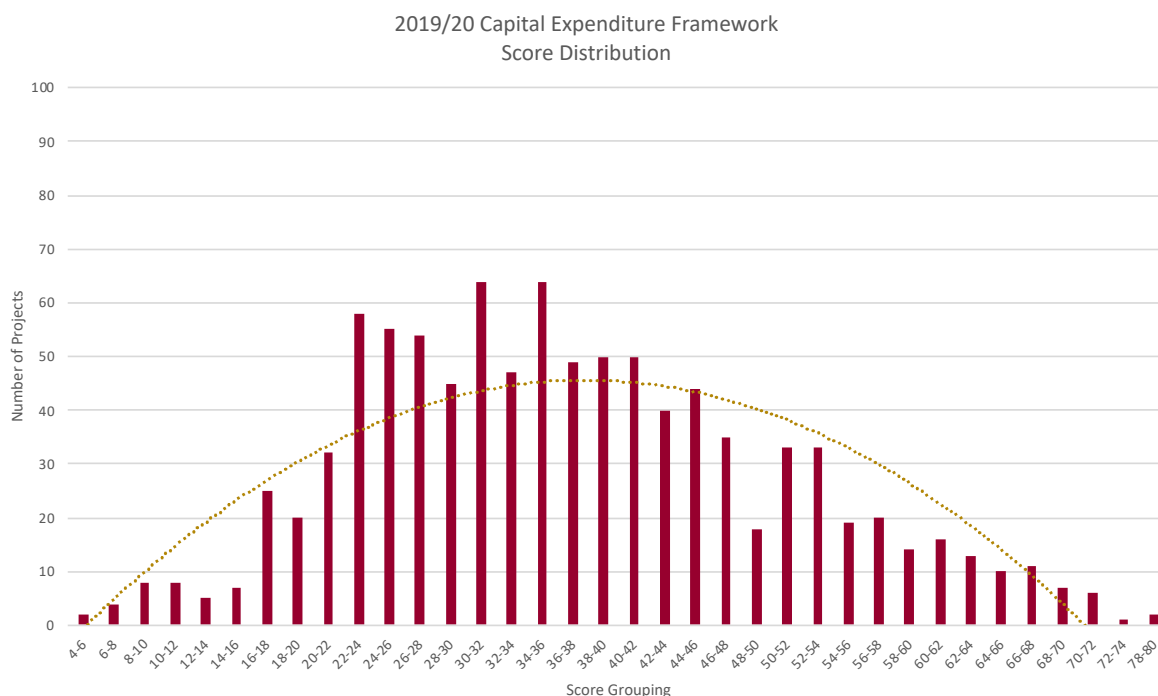


Figure 86: Project Score Distribution – per number of projects in score category

The project scores emanating from the Stellenbosch CPM approximates a normal distribution, which is indicative of the following:

- The prioritisation model is not bias towards any project;
- The prioritisation model evaluates projects on a scientific basis, and;

The fundamental data captured for projects is sufficient for a first round prioritisation.

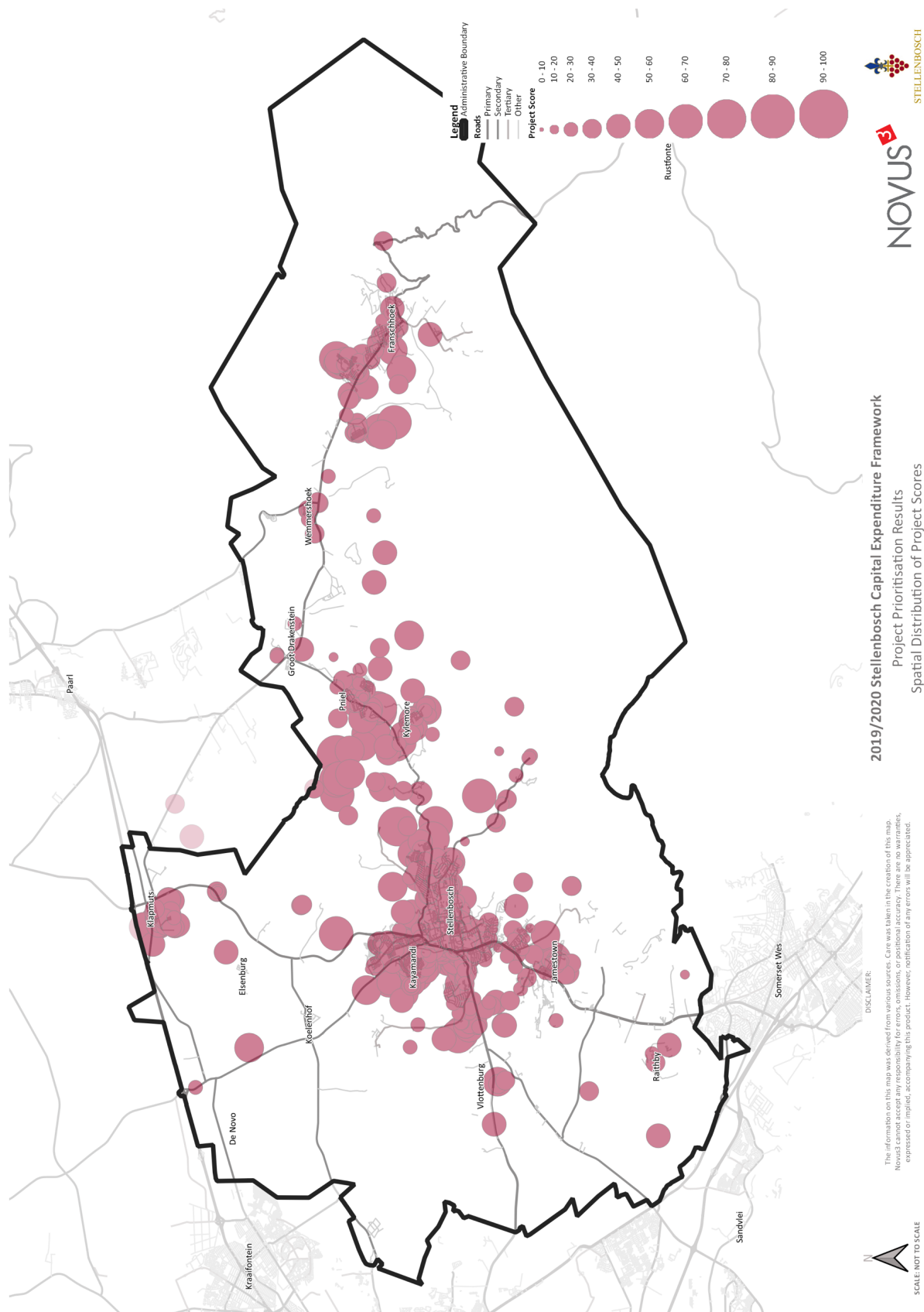
8.6.4 Scores Distribution: Spatial distribution

One of the key benefits of the prioritisation model is that it enables alphanumeric and spatial data analytics, which means that spatial inputs are used to prioritise projects. Spatial prioritisation and budget alignment is not only a prerequisite in terms of SPLUMA, but it is also a policy imperative for the IUDF – therefore, spatially-based prioritisation enables true spatial targeting.

Considering the spatial parameters used in the CPM, it is not surprising to see that projects within the FAs, and PDAs scored higher than projects in the commercial farming areas. This is as a result of the increased emphasis and weighting on these criteria within the CPM. It is important to take note of the following when interpreting the spatial distribution of project prioritisation scores:

- Projects' geo-referenced locations are captured on CP3 as either a point, line or polygon geometry;
- Project geo-referenced locations were reduced to the centroid of each project location for aggregation and displaying purposed, and;

Project score distribution locations are therefore an approximation of a project's location, and not an absolute indication of the project's location or implementation area.



2019/2020 Stellenbosch Capital Expenditure Framework
 Project Prioritisation Results
 Spatial Distribution of Project Scores

Map 22: Project Prioritisation Results - Spatial

Section 9 Budget Scenario



9 Budget Scenario

9.1 Contextualisation

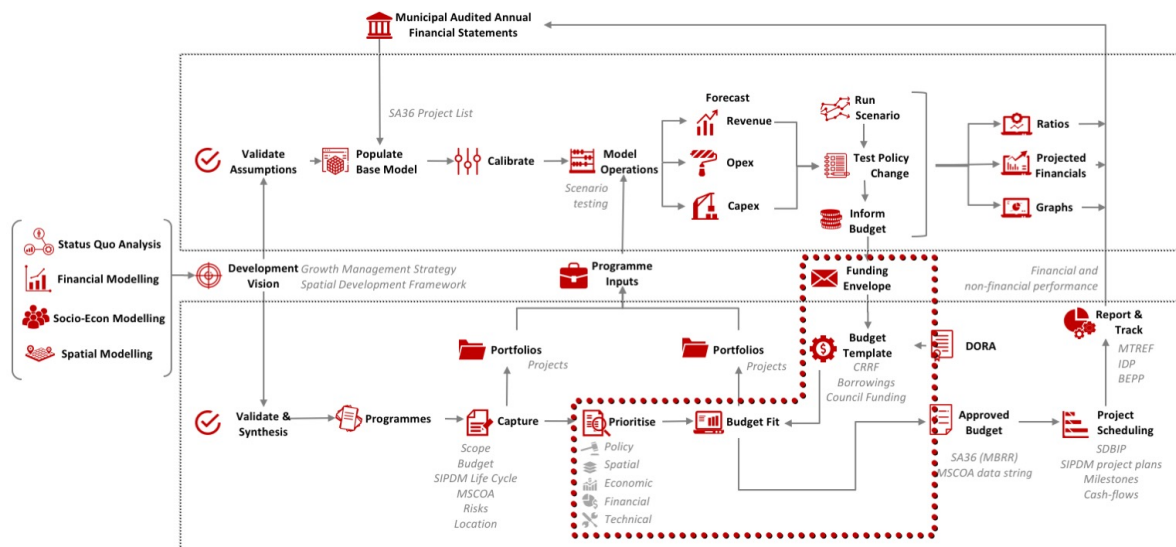


Figure 87: Budget Scenario

*"Improved processes for municipal planning and budgeting empower a municipality to make more informed decisions and are fundamental to sustainable and efficient service provision.
 - The generic municipal budget cycle is set out in the MFMA and described in MFMA circular 19."*

National Treasury Local Government Budget and Expenditure Review: 2006/07 – 2012/13

The previous section explained the purpose of the CP³ Capital Prioritisation Model (CPM) as a systematic and objective methodology that provides a way to rank a diverse set of projects into an order of importance based on each project's alignment to the strategic, spatial, social, economic, and financial objectives of the municipality. However, this process alone does not result in a capital budget for the municipality. The ranking of projects is but one input into the budget scenario methodology.

The purpose of this section of the Capital Expenditure Framework is to discuss the methodology, rule set and criteria used during the budget scenario process as well as to demonstrate how different choices regarding the budget scenario strategies will result in different capital budget results.

The budget scenario methodology can be summarised in a schematic diagram shown in the figure below. Essentially the budget scenario methodology is a systematic application of a set of rules and parameters which will result in a project either being added to the draft budget or rejected from the draft budget portfolio.

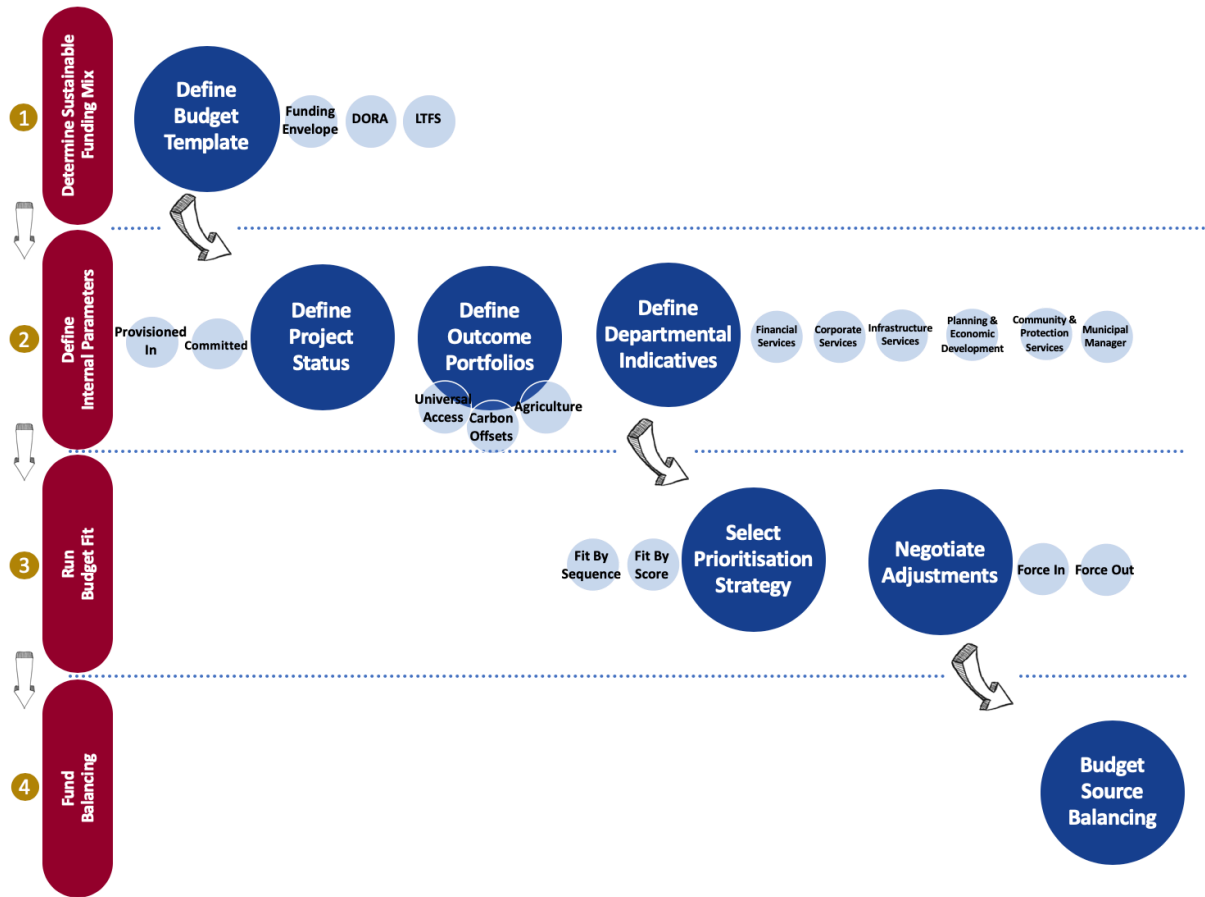


Figure 88: budget scenario Methodology

9.2 budget scenario parameters

The following parameters all take part within the budget scenario process:

9.2.1 Affordability Envelope

The affordability envelope as defined in a previous section of this document³⁴, is the sustainable and financially tested total budget that should be maintained by the municipality. If the capital budget exceeds this total, the municipality could encounter some unforeseen circumstances in future that will compromise its financial sustainability.

The parameters of the affordability envelope determine the strategy used for budget scenario. It is possible to express the affordability envelope in terms of:

- Portfolios;
- Stages;
- Departments; and
- Total budget per year.

³⁴ Section 7 – Affordability Envelope

In each of the above-mentioned strategies, the total budget available are determined by either a Portfolio, Stage, or Department, or a combination of the different strategies. The sequence in which these strategies are organised, also determine the outcome of the budget scenario process. If no strategy applies, or if a strategy's budget is depleted, the total budget parameter per year is utilised. Once the total budget parameter per year has been depleted, projects will obtain a "No Fit" status.

9.2.2 Project Score

Project scores has been determined as described in a previous section in this document.³⁵ The purpose of a project score is to determine a relative ranking between all the projects with a capital demand. Projects with the highest score has the first opportunity to be allocated budget.

9.2.3 Project Status

Within the budget scenario, projects can be allocated a specific status based on the previous MTREF. These statuses are:

- **Committed** - Committed projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, and which are contractually committed as assets under construction. Termination of any committed projects will result in either legal or financial liability for the municipality. Given commitments made on these projects by the municipality, the budget scenario methodology regards these projects as non-negotiable, irrespective of their CPM project score. Furthermore, projects that fall under this category will be fitted to the capital budget in the financial year in which they request money (no delays may be applied) and they may exceed the municipal, portfolio or departmental cap which have been applied in the template.
- **Provisioned In** - Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality. The budget scenario methodology regards these projects as having a higher priority than normal projects in the list (given their status received during previous MTREF budget publications) however their implementation timeframes are negotiable to an extent. Projects that fall under this category will be fitted to the capital budget in the financial year in which they request money only if there is sufficient capital budget available in the capital budget template and they may not exceed the municipal, portfolio or departmental cap which have been applied in the template. If the capital budget requests exceed the municipal capital budget template either at a municipal, portfolio or departmental indicative level, then provisioned projects may be fitted with delay to a financial year where there is sufficient municipal capital budget cap available.

9.2.4 Year of Budget Request

Projects has a specific budget request in a specific year, or a specific budget request over a period of years. The unique combination of budget request versus budget year is considered in the budget scenario process.

³⁵ Section 8 – Project Prioritisation

9.2.5 Project Budget Request

The project budget request is used to compile a MTREF budget, and is captured across the total lifecycle of the project.

9.3 budget scenario process

The following process explains how the above-mentioned parameters interact in order to compile a budget.

9.3.1 Step 1: Define a DORA MTREF Budget Template

The first step of the budget scenario process is a mandatory step required to determine the municipal capital budget cap or total amount of available capital funding for the Medium-Term Revenue and Expenditure Framework (MTREF). This is usually informed by a number of sources:

9.3.1.1 Division of Revenue Act (DORA)

The Division of Revenue Act is published on an annual basis with the distinct purpose to document the equitable share and grant allocations to municipalities. The exact publication dates of the DORA may differ from year to year. The DORA publication will therefore set out all the external available capital funding for the municipality emanating from the national and provincial budgets. Typical funding sources for the municipal capital budget emanating from the DORA publication include:

- Public Transport Infrastructure Systems Grant (PTIS);
- Neighbourhood Development Partnership Grant (NDPG);
- Urban Settlements Development Grant (USDG);
- Integrated National Electrification Programme (INEP);
- Community Library Services (CLS);
- Social Infrastructure Grant (SIG);
- LG SETA Discretionary Allocation;
- Integrated City Development Grant (ICDG); and
- Housing Delft Grant.

9.3.1.2 Stellenbosch Long Term Financial Strategy

All internally generated capital budget funding is determined through financial modelling undertaken by the Stellenbosch Local Municipality as part of their submissions to National Treasury on the Municipal Budget Reporting Regulations templates. Internal capital budget funding typically comprises the following funding sources:

- Own Municipal Funding: Funding generated from municipality revenue (i.e. rates and taxes).
- Public Contributions and Donations: Donations and bulk services contributions for capital expenditure to provide additional bulk capacity to service new developmental demand.

- Capital Replacement Reserves (CRR): Savings by the municipality for deferred capital expenditure to maintain the existing municipal asset base.
- Borrowings: External loans from the financial markets or bonds issued by the municipality to the financial markets.

It is important to note that not all projects are eligible to utilise all funding sources. For example, the PTIS grant is only applicable to infrastructure directly supportive of public transport and the INEP grant is only applicable to electrification programmes and projects. Therefore, although the budget template cap for the municipality is equal to the sum of the DORA publication and all internal capital funding sources, a funding source balancing exercise should be undertaken prior to publishing the final budget in order to ensure that only projects eligible for certain grants are funded by those grants.

The Stellenbosch Long Term Financial Modelling also results in a Long Term Financial Strategy which evaluates amongst others the Stellenbosch Local Municipality financial position and calculate what the optimal funding mix should be per annum, in order to maintain a desirable financial situation.

9.3.2 Step 2: Define project Committed or Provisional Status

The next step in the budget scenario process is regarded as an optional step, given that the municipality may decide to prepare a budget which either includes or excludes the budget scenario impact of multi-year capital project commitments. In reality, no budget preparation process is undertaken in isolation and the effect or commitments published in the previous financial year's approved capital budget (Annexure A) or the mid-year adjusted budget (Annexure B), will have an effect on the availability of capital funding for new projects to enter the budget list.

The municipality's CP3 system allows for two different project statuses during budget scenario in order to account for the multi-year budget effect of projects which were previously published as part of either the approved or adjusted municipal capital budget:

- Committed Projects

Committed projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, and which are contractually committed as assets under construction. Termination of any committed projects will result in either legal or financial liability for the municipality. Given commitments made on these projects by the municipality, the budget scenario methodology regards these projects as non-negotiable, irrespective of their CPM project score. Furthermore, projects that fall under this category will be fitted to the capital budget in the financial year in which they request money (no delays may be applied) and they may exceed the municipal, portfolio or departmental CP3 which have been applied in the template.

- Provisioned Projects

Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality. The budget scenario methodology regards these projects as having a higher priority than normal projects in the list (given their status received during previous MTREF budget publications) however their implementation timeframes are negotiable to an extent. Projects that fall under this category will be fitted to the capital budget in the financial year in which they request money only if there is sufficient

capital budget available in the capital budget template and they may not exceed the municipal, portfolio or departmental CP3 which have been applied in the template. If the capital budget requests exceed the municipal capital budget template either at a municipal, portfolio or departmental indicative level, then provisioned projects may be fitted with delay to a financial year where there is sufficient municipal capital budget cap available.

From the above it is evident that the classification of committed and provisioned status of projects may have a profound impact on the content of the capital project budget list. For example, if the entire adjusted budget capital project list of the municipality is regarded as committed, then the only discretionary expenditure available to the municipality will be the difference between the adjustment budget bottom line for year 2 and year 3 of the MTREF and the available capital budget sources, as well as the total budget cap for year 3 of the MTREF, given that the adjusted budget publication does not extend to the third year of the new MTREF budget.

9.3.3 Step 3: Define Outcome Portfolios

The budget template which is the primary input to the budget scenario also allows the municipality to define capital budget amounts for key portfolios. The definition of portfolios and setting up budget cap amounts per portfolio is also an optional step in the budget scenario process. These budget amounts will be ring-fenced for these portfolios and only projects which are earmarked to form part of those portfolios may compete for those budget amounts. For example, suppose the municipality executives decide that 15% of the total municipal budget must be ring-fenced for repairs and maintenance of existing assets. The budget template could be used to ring-fence 15% of the total capital budget for a portfolio called “Repairs and Maintenance”.

During the budget preparation period, projects would be classified as contributing to the “Repairs and Maintenance” portfolio by virtue of their MSCOA project segment classification. When the budget scenario is executed, projects which belong to the “Repairs and Maintenance” portfolio will be fitted to the budget in order of highest CPM score to lowest CPM score until the budget cap of the “Repairs and Maintenance” portfolio has been reached.

This does not mean that no other repairs and maintenance projects will be fitted to the capital budget. It simply means that their preferential treatment during the budget scenario process has been depleted and that the remaining repairs and maintenance projects will have to compete on an even basis with other capital requests based on their CPM score.

Setting up of various portfolio budget CP3 based on the outcome which is achieved by each of the portfolios is one mechanism by which a municipal capital budget could be generated based on the desired outcomes which the municipality advocates in their strategic documents.

9.3.4 Step 4: Define Departmental Indicatives

The fourth step in preparing the budget scenario template allows for the municipality to set departmental budget CP3 or indicatives. The setting of budget cap amounts per department is also an optional step in the budget scenario process. Departmental CP3 can be set for all departments or only for some departments. For example, some projects have difficulty competing effectively for budget owing to their nature. Capital investments in the form of library books may struggle to compete on a CPM score basis with utility services projects such as water and sanitation or electricity.

Setting of departmental indicatives or departmental budget CP3 could be an alternative strategy to provide a minimum budget threshold amount for departments who struggle to compete effectively for capital budget based on the CPM project score. The budget scenario mechanism for departmental

indicatives or departmental CP3 works on much the same basis as the portfolio CP3. The departmental budget amounts will be ring-fenced per department and only projects which are earmarked to form part of those departments may compete for those budget amounts. When the budget scenario is executed, projects which belong to the ring-fenced departments will be fitted to the departmental budget cap in order of highest CPM score to lowest CPM score until the budget cap of that department has been reached.

9.3.5 Step 5: Select Prioritisation Model Run / Results

The prioritisation model (including the Economic Impact Model) must be run prior to undertaking any form of budget scenario. Therefore, the selection of a prioritisation model and its associated results is a mandatory step in any budget scenario process.

When the budget scenario is executed, as a rule, projects will be in order of highest CPM score to lowest CPM score until the municipal, portfolio or departmental budget CP3 has been reached, depending on the budget template which has been specified.

A visualisation of the budget scenario result is shown below. This shows the ranking of projects from highest CPM priority (on the right) to lowest CPM priority (on the left). Each project is shown as a stacked bar in bar graph format, where the sum of the MTREF financial year capital requests for the projects (total MTREF capital budget) is shown as the height of the bar.

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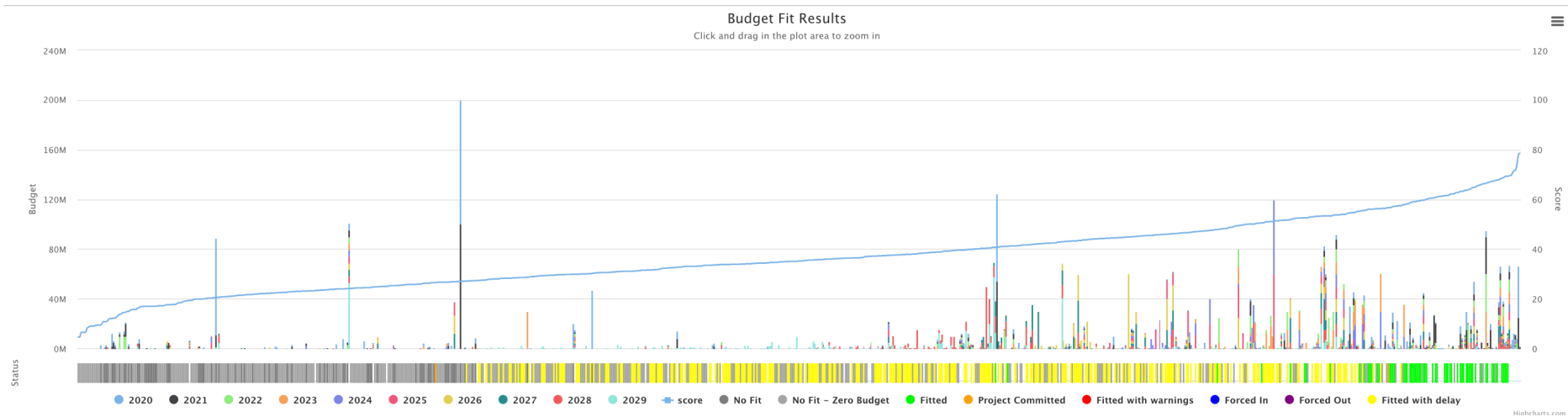


Figure 89: budget scenario results

³⁶ The budget scenario results graph is an interactive graph that can be accessed via the CP3 system used by the City.

The budget scenario status of each project, after executing of the budget scenario routine, is shown below the bar graph in colours. Each colour represents a different status. In the example provided, the orange projects represent committed projects, which means they were fitted irrespective of their CPM project score in the financial year in which they requested budget.

Green projects represent projects which were fitted based on their CPM project score in the year which they requested funding, given that there was available capital budget available in that financial year. The yellow projects represent projects that were fitted with delay. These projects received high scores on the CPM but there was not sufficient budget available in the financial year in which they requested capital funding, therefore the budget scenario routine fitted them to a financial year later than they requested budget, where sufficient available capital budget was available in the budget template.

Eligible status include:

- **Committed:** Committed projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, and which are contractually committed as assets under construction. Termination of any committed projects will result in either legal or financial liability for the municipality.
- **Provisioned-In:** Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality.
- **Provisioned-in with delay:** Provisioned projects are those projects which formed part of either the approved capital budget (Annexure A) or the adjusted capital budget (Annexure B) of the municipality for the previous financial year, but which are not contractually committed as assets under construction. Termination of any provisioned projects will not result in either legal or financial liability for the municipality and are therefore delayed in the budget scenario process. A project will then be delayed to a financial year where the budget cap total has not been exceeded.
- **Fit:** Projects that enjoy the status “fit” are projects that scores highest in relation to the remaining projects to be fit, with the provision that the budget cap total has not been exceeded.
- **Fit with Delay:** Projects that enjoy the status “fit with delay” are projects that scores highest in relation to the remaining projects to be fit, with the exception that the budget cap total for the year in which the project requests budget has been exceeded. A project will then be delayed to a financial year where the budget cap total has not been exceeded.
- **No Fit:** This status is assigned to projects that were not able to qualify for budget.
- **No Fit – Zero Budget:** This status is assigned to projects that do not request budget.

9.3.6 Step 6: Negotiated adjustments (Force-in / Force-out)

Once a draft capital budget has been developed using the budget scenario process, the portfolio of projects which make up the draft capital budget needs to undergo a number of municipal approvals.

It is inconceivable that any portfolio of capital projects which has been prepared in a complex multi-disciplinary collaborative framework will meet all the expectations. Therefore, a negotiated

adjustment process is accommodated in the budget scenario process whereby projects can be added or removed from the portfolio of capital projects based on motivations and representations made during budget forums.

9.3.7 Step 7: Budget Source Balancing

The last step in the budget scenario process is to ensure that all available funding sources documented in the budget scenario Template have been utilised in full and that none of the funding sources are over-subscribed. The funding source balancing is also the last check to ensure that all projects which are linked to grant funding are eligible according to the funding definitions and rules as set out in the Division of Revenue Act (DORA).

9.4 Budget Scenario Results Analysis

9.4.1 Planned capital expenditure review

Overall planned capital expenditure was estimated at R5,7 Bn over the planning period, subsequent to the second capital demand capturing cycle. This, although already in excess of the affordable capital expenditure forecasted, represents only those planned capital expenditure which are captured in the CP3 system. The annual planned capital expenditure can be expressed as follows:

Table 76: Planned Capital Expenditure and Affordable Capital Expenditure

Year	Planned Capital Expenditure	%
2019/2020	R 1 155 145 272	20%
2020/2021	R 959 878 659	17%
2021/2022	R 740 192 900	13%
2022/2023	R 740 017 754	13%
2023/2024	R 433 019 619	8%
2024/2025	R 458 314 256	8%
2025/2026	R 393 318 130	7%
2026/2027	R 419 737 630	7%
2027/2028	R 245 045 909	4%
2028/2029	R 198 933 462	3%
Total	R 5 743 603 591	100%

This planned capital expenditure should be considered in light of an affordable capital programme of R 4 129 million, as forecast by the Long Term Financial Model taking into account the latest approved MTREF of Stellenbosch. Based on the results of the independent financial assessment Stellenbosch has more space to take up external borrowing to fund capital expenditure over the 10 of the Capital Expenditure Framework.

9.4.2 Budget Scenario Results

9.4.2.1 Fit Status

Table 77: Fit Status

Budget Scenario Status	Total during analysis period	Total %
Fitted	R162 020 500	3%
Fitted with delay	R1 365 360 044	29%
No Fit	R425 945 000	9%
No Fit - Zero Budget	R-	0%
Project Committed	R2 766 813 047	59%
Total	R4 720 138 591	100%

Table 77 expresses the capital budget after applying the budget scenario mechanism as described in the sub-section leading up to the budget scenario results. It shows that 62% of the capital demand has been assigned in the same year as it requests. 59% of the capital demand however is Committed, which means it is projects with a higher priority than other projects and so were firstly eligible to the funding envelope. This means that the funding envelope were significantly smaller for other planned capital expenditure. It is because of the previously mentioned fact that 30% of the capital has been fit, but with a delay.

Only 9% of capital demand has not been fit over the 10 years. It is important to notice, that the following scenario would have realised if the funding envelope was bigger:

- the bigger the funding envelop, the less projects will be fit with delay, which means that capital demand will roll out as capital assets sooner, rather than later;
- The bigger the funding envelope, the less projects will not fit to the Capital Expenditure Framework at all, and;
- The bigger the funding envelope, the more projects will be fit to the Capital Expenditure Framework.

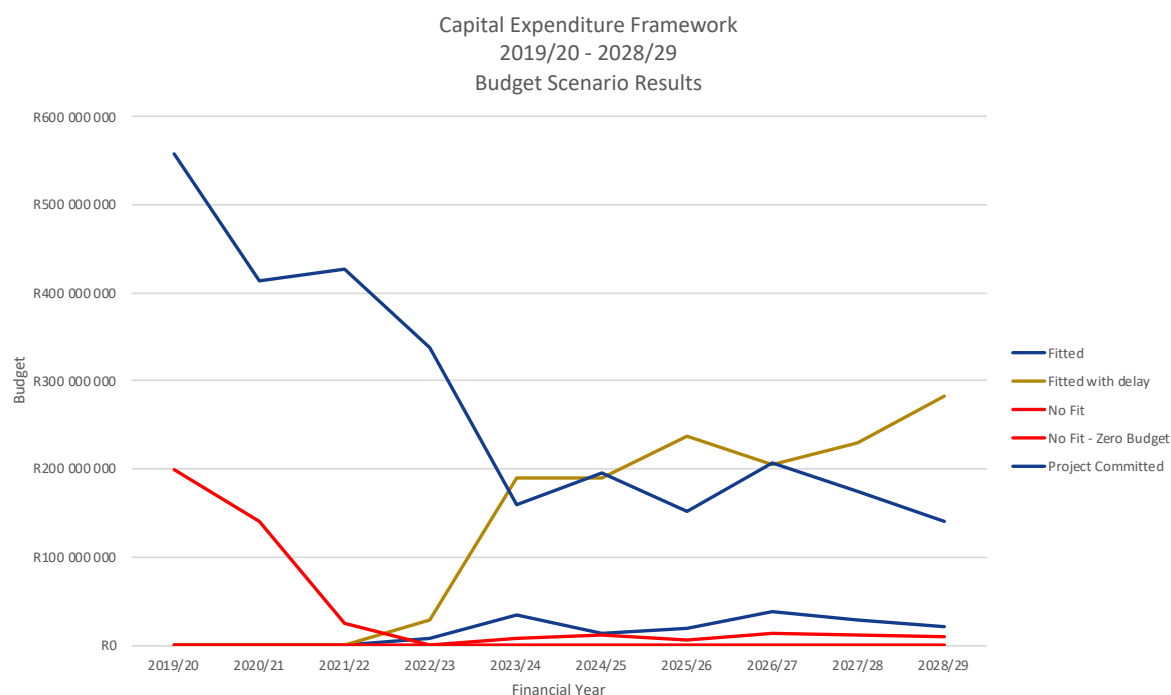


Figure 90: budget scenario status over time

The figure above represents the fit results as per the budget scenario applied. It can be interpreted as follows:

- Committed: In the first year, project that are currently under construction, still has contractual commitments and cannot be fit at any other stage without having a negative impact on the municipality. These projects therefore are allocated budget in the first year, and not over the 10 year period.

- **Provisioned in:** These projects receive the most budget in the first years as they are already declared on the MTREF. As time continues, these commitments decrease, and so does the capital requirement of these projects over time.
- **Fitted:** Between the first and Second financial year there is a sharp increase in capital demand fitted. This is because of the finalisation of projects with a committed status. Once the commitments has been served, the funding envelope opens up capacity to fit new projects.
- **Fitted with delay:** In the first financial years almost no capital expenditure is allocated to projects with delay. That is because there is no capacity in the first year, and a Fit with Delay status can only be assigned to projects that are delayed. Fit with Delay budget gradually increase as the funding envelope opens up., and then decrease as the capital demand decrease.
- **No Fit:** Projects that do not fit are projects with the lowest score. This means that projects with higher score was fitted with delay. Once the funding envelopes has been depleted, these projects – the no fit projects – are not included in the budget scenario. It has a high proportion of the Capital demand in the first year, as the low scoring projects in this year compete with high capital demand assigned to statuses such as committed and provisioned in. It decrease sharply as more capital is fitted with delay.
- **No Fit – Zero Budget:** Even though these projects do not ask for any Capital Demand, they have been conceptualised and will reach a point of maturity in the next ten years where the will have a Capital Demand. It is therefore important to have sight of these projects on one single platform, together with the rest of the project pipeline.

9.4.3 2019/2020 Budget demand vs. funding envelope vs. Budget scenario results

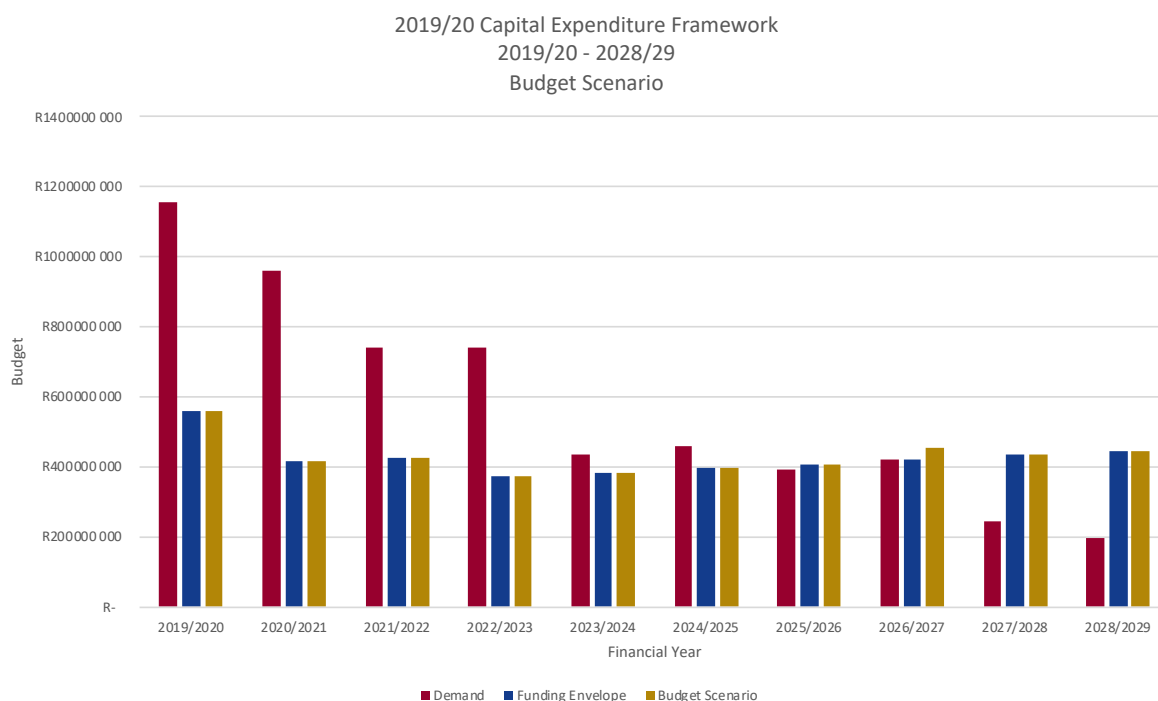


Figure 91: Planned capital expenditure vs funding envelope vs budget scenario results

Table 78: Planned capital expenditure vs funding envelope vs budget scenario results

Financial Year	Demand	Funding Envelope	Budget Scenario
2019/2020	R1 155 145 272	R558 276 528	R558 276 528
2020/2021	R959 878 659	R414 612 759	R414 612 759

Financial Year	Demand	Funding Envelope	Budget Scenario
2021/2022	R740 192 900	R426 337 700	R426 337 700
2022/2023	R740 017 754	R374 000 000	R373 996 754
2023/2024	R433 019 619	R385 000 000	R384 977 719
2024/2025	R458 314 256	R397 000 000	R397 007 956
2025/2026	R393 318 130	R408 000 000	R407 979 530
2026/2027	R419 737 630	R421 000 000	R451 997 630
2027/2028	R245 045 909	R433 000 000	R433 010 909
2028/2029	R198 933 462	R446 000 000	R445 996 106
Total	R5 743 603 591	R4 263 226 987	R4 294 193 591

From the graph above the following findings can be made:

- Planned capital expenditure exceed the desired funding envelope up to 2025/2026 after which the available capital in terms of the funding envelope exceed the demand. The first four years has the highest proportion between planned capital expenditure and the funding envelope. This is because of the nature of forward planning and project budget estimation – project managers has more clarity and certainty on how much a project will cost in the near future versus a period further than that.
- In 2019/2020 the funding envelope is fitted to 100%. This means that the funding envelope is achieved and in line with the MTREF.
- In 2020/2021 the funding envelope is exceeded by the budget that is fitted. This is due to some projects that enjoy committed statuses and has a low first year capital demand, but increase in capital demand in the outer two years. These “trojan horses” should be reviewed as they place immense pressure on outer year budgets.
- From the data it can be seen that the last two years, 2029/2030 and 2030/2031 are allocated budget. This might seem as an anomaly since there is no funding envelope. This is because of two realities. Firstly, the fit with delay effect. If a project does not receive capital in the year it asks, it will be delayed until it has available budget. This has a rolling effect and can be seen in the last three years. The second reality that effects this, is that projects are being fitted based on their capital budget request, for every year it requests budget. This means that if a project is fit in 2028/2029, it will have at least a three year impact on the budget.

9.5.1 Contextualisation

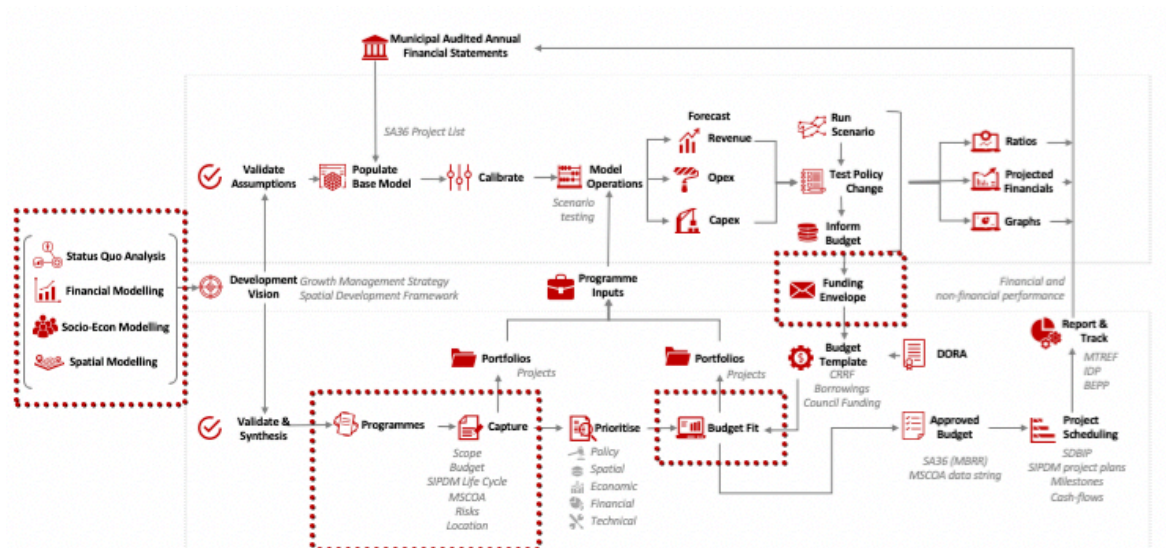


Figure 92: Budget profile input data

Four elements are used as input to the budget profile. This includes:

- Capital demand quantum modelling (Section 4);
- Planned capital expenditure (Section 5);
- Affordable envelope (Section 7), and;
- Budget scenario results (Section 9).

9.5.2 Key findings

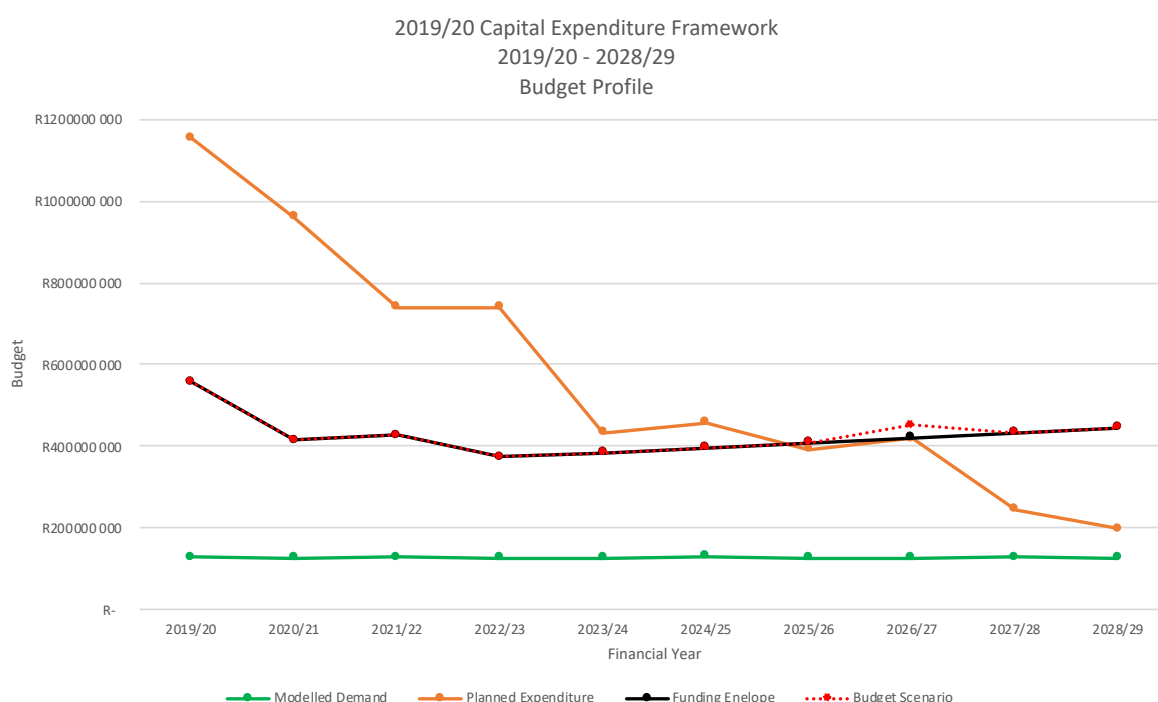
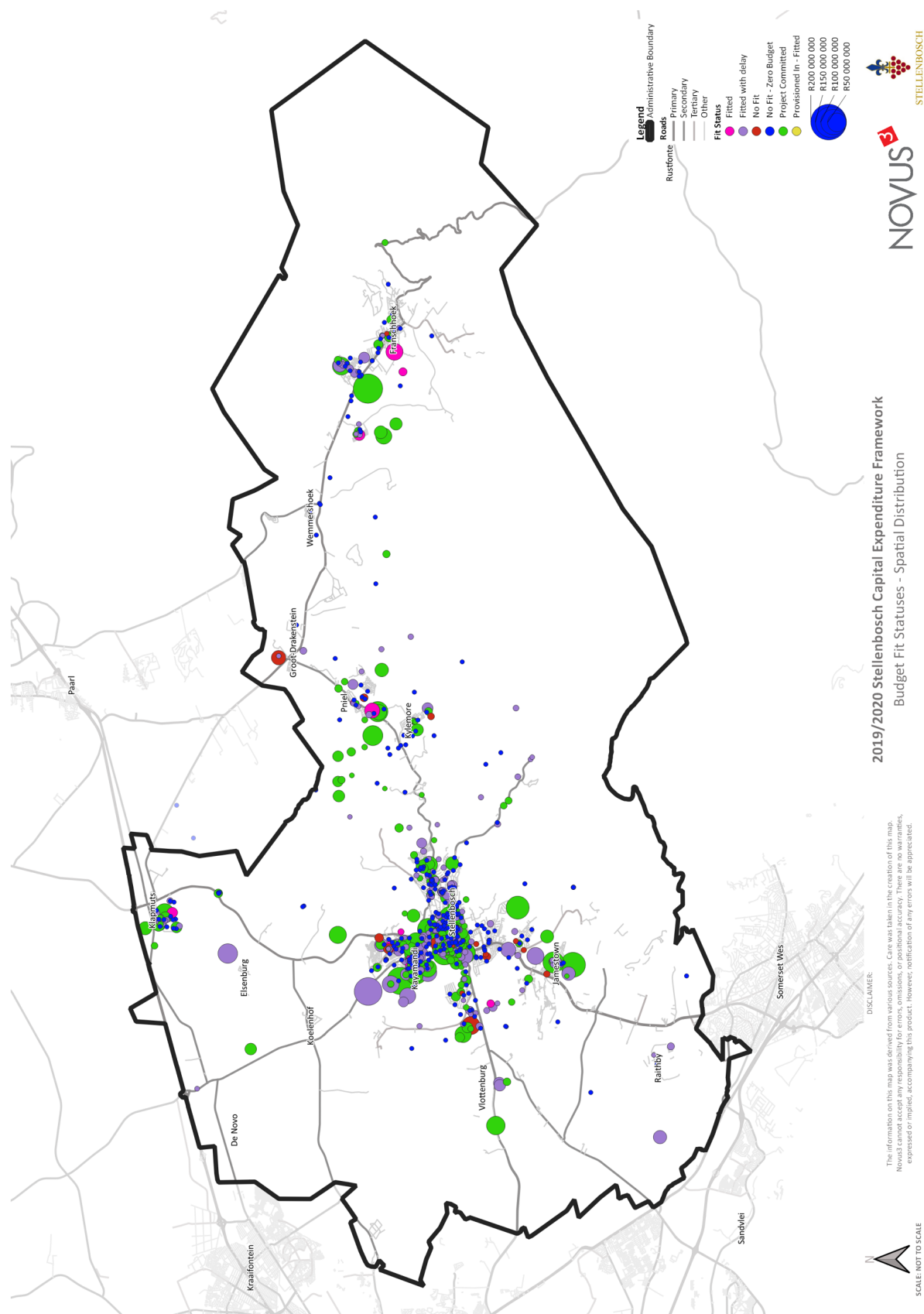


Figure 93: Budget Profile

The budget profile is the culmination of the CEF, where the Modelled Demand, the Planned Capital Expenditure, the Funding Envelope and the Budget Scenario is compared over time.

- Modelled Demand:** The modelled demand does not exceed the funding envelope. This means that the municipality can afford to deal with the modelled infrastructure demand based on the assumption that a dramatic influx of population will not be experienced in the short to medium term.
- Planned Capital Expenditure:** The planned capital expenditure is significantly higher than what is affordable as per the funding envelope, and exceeds what is minimum requirements as per the modelled demand in terms of providing for the growing population of the municipality.
- Funding Envelope:** The funding envelope that was proposed as per the Long Term Financial Plan was noted, however the first three years were increased in order to align the CEF with the MTREF. The assumption is, that even though the LTFP suggests a lower MTREF capital budget, the municipality was still able to find the necessary funds to allocate more funds in the first three years. From year 4 to year 8 the budget scenario aligns perfectly with the funding envelope, but reduce slightly in the last two financial years as there are not sufficient capital request eligible for these financial years.
- Budget Scenario:** The budget scenario uses the funding envelope as guidance to fit projects to the affordable budget.

9.5.2.1 Fit Status: Spatial



Map 94: budget scenario statuses - Spatial

From Map 94 above it can be seen that the spatial investment paradigm has realised through the Prioritisation and budget scenario methodology:

- Klapmuts: Most projects in this area either has no budget requested or are fit with delay. This highlight the fact that this future expansion node of Stellenbosch will enjoy capital expenditure, but the majority thereof will realise later on.
- Koelenhof: The Koelenhof node development is still in concept phase. One this area has a clear spatial vision, the municipality can respond with capital projects required to facilitate such expansion.
- Vlottenburg: The potential that boasts within this area is unprecedented. It is for that reason that most of the capital projects within the Vlottenburg area has been fit as per the budget scenario module of CP3.
- Stellenbosch Central: It is clear from the figure above that Stellenbosch central is house of a variety of projects, and so a variety of fit statuses is assigned to this part of the municipality.
- Franschoek: Small capital projects within the Franschoek area has been fitted to the Capital Expenditure Framework. The majority has been fitted with delay which means that other projects across the municipality has been prioritised and fitted to the budget first.

Row Labels	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29
Community and Protection Services	R64 315 000	R28 245 000	R27 675 000	R29 374 000	R28 405 000	R19 200 000	R41 287 000	R23 440 000	R14 750 001
Cemeteries	R2 200 000	R1 500 000	R8 000 000	R500 000	R-	R-	R-	R-	R-
Community and Protection Services: General	R3 525 000	R250 000	R-	R-	R-	R-	R-	R-	R-
Community Development	R385 000	R85 000	R100 000	R560 000	R55 000	R60 000	R607 000	R50 000	R60 000
Community Services: Library Services	R1 960 000	R1 340 000	R555 000	R360 000	R630 000	R260 000	R1 500 000	R800 000	R50 000
Disaster Management	R2 900 000	R800 000	R-	R1 500 000	R-	R-	R-	R-	R-
Nature Conservation	R4 360 000	R3 120 000	R2 420 000	R2 000 000	R2 050 000	R2 000 000	R5 000 000	R1 000 000	R1 500 000
Environmental Management: Urban Greening	R185 000	R150 000	R700 000	R50 000	R550 000	R-	R2 500 000	R-	R-
Fire and Rescue Services	R23 900 000	R800 000	R-	R3 500 000	R5 500 000	R350 000	R1 000 000	R6 000 000	R2 600 000
Halls	R250 000	R250 000	R700 000	R1 300 000	R1 000 000	R1 000 000	R500 000	R500 000	R1 500 000
Law Enforcement and Security	R5 150 000	R5 850 000	R5 350 000	R4 650 000	R5 150 000	R4 800 000	R4 850 000	R4 950 000	R5 600 001
Parks, Rivers and Area Cleaning	R10 550 000	R7 700 000	R4 700 000	R10 790 000	R13 440 000	R10 690 000	R10 790 000	R10 140 000	R3 440 000
Sports Grounds and Picnic Sites	R7 530 000	R4 800 000	R4 750 000	R2 000 000	R-	R-	R14 500 000	R-	R-
Traffic Services	R1 420 000	R1 600 000	R400 000	R2 164 000	R30 000	R40 000	R40 000	R-	R-
Corporate Services	R111 970 000	R35 050 000	R29 050 000	R19 350 000	R9 760 000	R9 750 000	R14 050 000	R30 850 000	R34 800 000
(ICT)	R5 600 000	R5 100 000	R5 200 000	R6 600 000	R6 800 000	R6 800 000	R6 900 000	R6 900 000	R7 000 000
Parks, Rivers and Area Cleaning	R-	R-	R-	R-	R10 000	R-	R-	R-	R-
Properties and Municipal Building Maintenance	R106 050 000	R29 950 000	R23 850 000	R12 750 000	R2 950 000	R2 950 000	R7 150 000	R23 950 000	R27 800 000
Strategic Corporate Services: General	R320 000	R-	R-	R-	R-	R-	R-	R-	R-
Financial Services	R150 000	R150 000	R150 000	R-	R-	R-	R-	R-	R-
Executive Support: Financial Services: General	R150 000	R150 000	R150 000	R-	R-	R-	R-	R-	R-
Infrastructure Services	R371 856 528	R346 125 959	R369 238 900	R316 977 754	R333 936 119	R363 809 556	R346 478 330	R384 657 630	R360 105 908
Electrical Services	R34 290 000	R30 500 000	R38 950 000	R19 500 000	R60 500 000	R-	R37 100 000	R47 700 000	R50 800 000
Executive Support: Engineering Services: General	R800 000	R400 000	R-	R10 000	R60 910 000	R60 700 000	R300 000	R300 000	R300 000
Infrastructure Plan, Dev and Implement	R40 431 528	R37 796 528	R44 393 900	R65 522 754	R51 011 119	R73 209 556	R42 158 330	R105 222 630	R106 505 908
Roads and Stormwater	R37 800 000	R9 300 000	R12 050 000	R18 250 000	R33 500 000	R48 500 000	R74 200 000	R34 600 000	R18 850 000
Traffic Engineering	R19 800 000	R6 250 000	R2 400 000	R-	R700 000	R2 600 000	R6 000 000	R1 000 000	R500 000
Transport Planning	R12 600 000	R6 200 000	R6 000 000	R100 000	R1 300 000	R1 200 000	R25 220 000	R43 335 000	R84 050 000
Waste Management: Solid Waste Management	R31 735 000	R28 945 000	R34 345 000	R15 495 000	R14 015 000	R11 700 000	R16 150 000	R31 050 000	R17 600 000
Water and Wastewater Services: Sanitation	R114 400 000	R113 234 431	R98 350 000	R72 600 000	R51 100 000	R27 500 000	R22 400 000	R38 250 000	R42 300 000
Water and Wastewater Services: Water	R80 000 000	R113 500 000	R132 750 000	R125 500 000	R60 900 000	R138 400 000	R122 950 000	R83 200 000	R39 200 000
Municipal Manager	R35 000	R40 000	R40 000	R-	R-	R-	R-	R-	R-
Executive Support: Office of the Municipal Manager	R35 000	R40 000	R40 000	R-	R-	R-	R-	R-	R-
Planning and Economic Development	R9 950 000	R5 001 800	R183 800	R8 295 000	R12 876 600	R4 248 400	R6 164 200	R13 050 000	R23 355 000
Administrative Support	R-	R-	R-	R-	R-	R-	R1 000 000	R10 000 000	R20 000 000
Building Development Management	R-	R-	R-	R-	R-	R-	R-	R-	R-
Customer Interface & Administration	R-	R-	R-	R-	R-	R-	R-	R-	R-
Development Planning: Spatial Planning	R-	R-	R-	R-	R255 000	R45 000	R-	R-	R-
Economic Development and Tourism	R9 695 000	R4 785 000	R-	R-	R5 000 000	R-	R-	R-	R300 000
IHS: Informal Settlements	R-	R-	R-	R8 270 000	R5 250 000	R3 020 000	R3 025 000	R3 025 000	R3 025 000
IHS: New Housing	R50 000	R51 800	R58 800	R25 000	R24 000	R24 500	R25 000	R25 000	R30 000
Land Use Management	R150 000	R130 000	R125 000	R-	R-	R-	R-	R-	R-
Spatial Planning: Planning and Development	R55 000	R35 000	R-	R-	R2 347 600	R1 158 900	R2 114 200	R-	R-
Grand Total	R558 276 528	R414 612 759	R426 337 700	R373 996 754	R384 977 719	R397 007 956	R407 979 530	R451 997 630	R433 010 909

Table 79: Capital Expenditure Framework – budget scenario Results

Section 10 Programme per Functional Area



10 Programme per Priority Development Area

10.1 Contextualisation

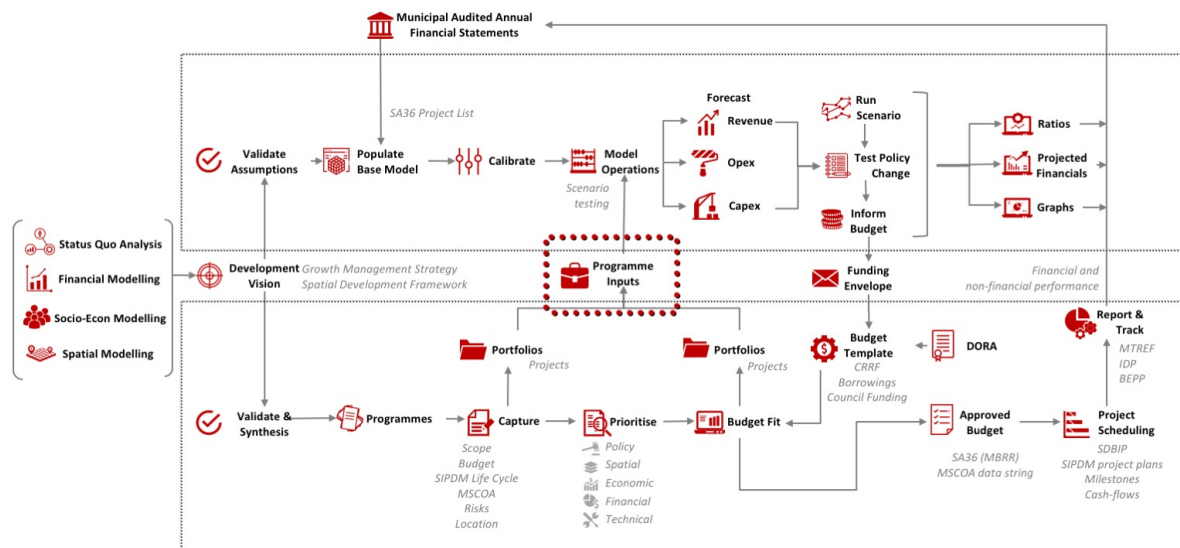


Figure 95: Programme analysis

The policies, plans and programmes of any sphere of government are part of a basic methodology developed in public administration for the rational performance of governmental functions entrusted by law to the Government. The policies, plans and programmes stand in a tiered or hierarchical relationship with one another:

- At the first level in this hierarchy lies the formulation of a governmental policy, which in essence identifies the desired outcome or goal of the governmental functions in question which the particular sphere of government is entrusted with;
- The second level in this hierarchy consists of the development of a plan, setting out the preferred strategy or pathway by means whereof the desired outcome or goal of the governmental functions in question will be pursued; in other words, the plan at this level manifests a strategic choice at a high level between the various options available for realising the adopted policy, inter alia taking into account the availability of resources, and;
- At the third level in this hierarchy then follows the identification of programmes, each of which details how various aspects of the approved plan will be implemented so that the desired outcomes or goals of the governmental functions in question can be achieved and the objectives of the adopted policy can be realised.

Within the context of this methodology, these three instruments (policies, plans and programmes) operate on a higher level of strategic assessment and decision-making. At the next level different projects are the implementation agents of programmes. Given the focus by government policy such as the National Development Plan, the Integrated Urban Development Framework and the Spatial Development Framework on spatial targeting, spatial justice, and spatial transformation projects are allocated to area based programmes to ensure an integrated view of project roll out and true integrated spatial development. To take a disciplinary based view of programmes revert planning methodology back to a per-line-function mentality within the municipality and so move away from the integrational effort of the IUDF and CEF, and toward the historic silo based planning style.

10.2 Investment paradigm

The investment paradigm of Stellenbosch Local Municipality is at its core rooted in the following:

- The Spatial Planning and Land Use Management Act; and
- The Spatial Development Framework.

It is necessary to consider all three of these guiding foundational elements of the Investment paradigm when evaluating the programmes per Priority Development Area.

10.2.1 SPLUMA Principles

The investment paradigm of Stellenbosch Local Municipality is informed by the principles of Spatial Planning and land Use Management Act (SPLUMA), and by the Integrated Urban Development Framework. The Spatial Planning and land Use Management Act set out the following principles to be applied in any organ of state that invest in space:

- Spatial Justice;
- Spatial Sustainability;
- Efficiency;
- Spatial Resilience; and
- Good Administration.

Stellenbosch adhered to the above mentioned principles by defining the investment paradigm as follow:

- Spatial Justice: To guide capital expenditure related to maintenance and renewal in settled areas within the municipality's jurisdiction but are not contributing to the desired urban structure of the municipality.
- Spatial Sustainability: Allocate capital expenditure in defined areas to realise integrated and compact urban form.
- Efficiency: Adhere to parameters set out in the Long-Term Financial Strategy in order to ensure capital expenditure that is in line with good financial practices and optimal usage.
- Spatial Resilience: Align capital expenditure at the hand of the Spatial Development Framework, which is developed with the intention to cope with any spatially based disturbance to the desired urban form.
- Good Administration: By implementing a municipal wide Capital Project Prioritisation and Performance platform, it is possible to track the implementation of the Capital Expenditure Framework.

10.2.2 Draft Spatial Development Framework Narrative

The investment paradigm of Stellenbosch is also informed and based on a spatial vision³⁷, namely the Draft Spatial Development Framework.

The key spatial structuring elements of the draft Spatial Development Framework includes:

- **Urban nodes:** The primary urban nodes, firstly includes Klapmuts as this is the identified area of expansion – based on development potential and the larger regional framework. Secondly is Stellenbosch central as this is the core of Stellenbosch and is deemed the area of compaction. Thirdly, is Franschhoek – which is a major role player in terms of the current space economy in the region. Stellenbosch cannot disregard this area and so prioritise maintenance investment in this area.
- **Rural nodes:** Rural nodes on their own are deemed as areas which should only enjoy maintenance expenditure in order to preserve the character of these areas. However, in the event where such a rural node is effected by the Adam Tas corridor, the investment paradigm shifts from a maintenance oriented approach to an investment oriented approach, in order to stimulate a specific need for compaction and densification.
- **Rural Area:** The rural areas represent the agricultural and tourism sector that plays a major role in the financial sustainability of Stellenbosch. Capital demand in these areas are usually of low intensity.
- **Adam Tas Corridor:** Capital Investment in the Adam Tas Corridor is vital in terms of the IUDF and the aims identified therein. The Corridor is deemed as a catalytic spatial structuring element that not only serves a local function, but also a regional function and, if enforced, will capture a critical mass with the potential to attract incredible potential for economic development spatial reform. Please refer to the Draft SDF form more information regarding the potential and rationale of the Adam Tas Corridor.

³⁷ The spatial development framework is in draft form, awaiting approval.



10.3 Functional area budget split

For this part of this section, the 2019/2020 capital expenditure framework has been expressed in terms of the Functional Areas. It seeks to identify the degree of spatial targeting achieved by the municipality.

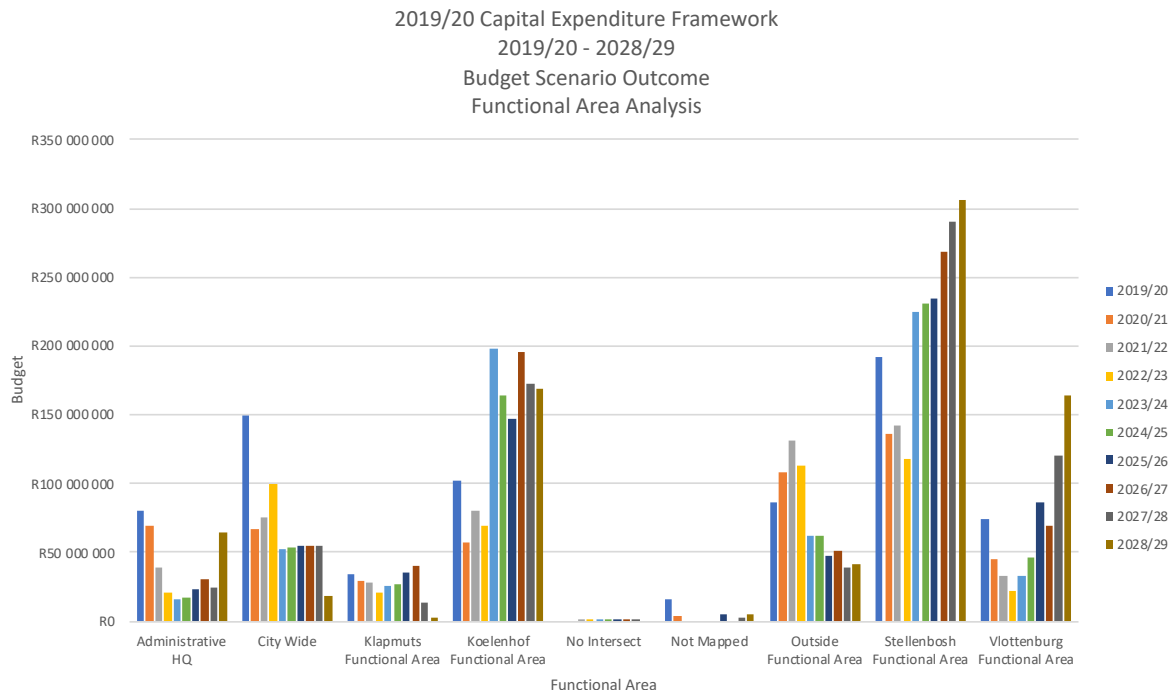


Figure 96: Programme totals per Functional Area

Functional Area Intersect	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Administrative HQ	R 80 665 000	R 69 686 800	R 38 476 800	R 20 770 000	R 15 434 000	R 17 674 500
City Wide	R 149 405 000	R 67 110 000	R 75 000 900	R 99 431 754	R 52 125 619	R 52 994 556
Klappmuts Functional Area	R 33 551 528	R 29 576 394	R 28 625 023	R 20 725 798	R 25 458 614	R 26 663 931
Koelenhof Functional Area	R 102 100 857	R 57 644 772	R 80 406 846	R 69 414 024	R 198 313 270	R 164 380 148
No Intersect	R 0	R 0	R 17 720	R 375 619	R 205 969	R 47 233
Not Mapped	R 15 845 000	R 3 750 000	R -	R -	R -	R -
Outside Functional Area	R 86 173 196	R 108 376 129	R 130 824 054	R 113 424 514	R 61 625 146	R 62 537 235
Stellenbosch Functional Area	R 192 161 502	R 135 588 586	R 142 050 325	R 118 140 182	R 224 501 707	R 231 197 145
Vlottenburg Functional Area	R 74 705 024	R 45 298 263	R 33 290 173	R 22 322 373	R 33 080 246	R 46 120 904
Grand Total	R 734 607 107	R 517 030 942	R 528 691 841	R 464 604 264	R 610 744 570	R 601 615 653

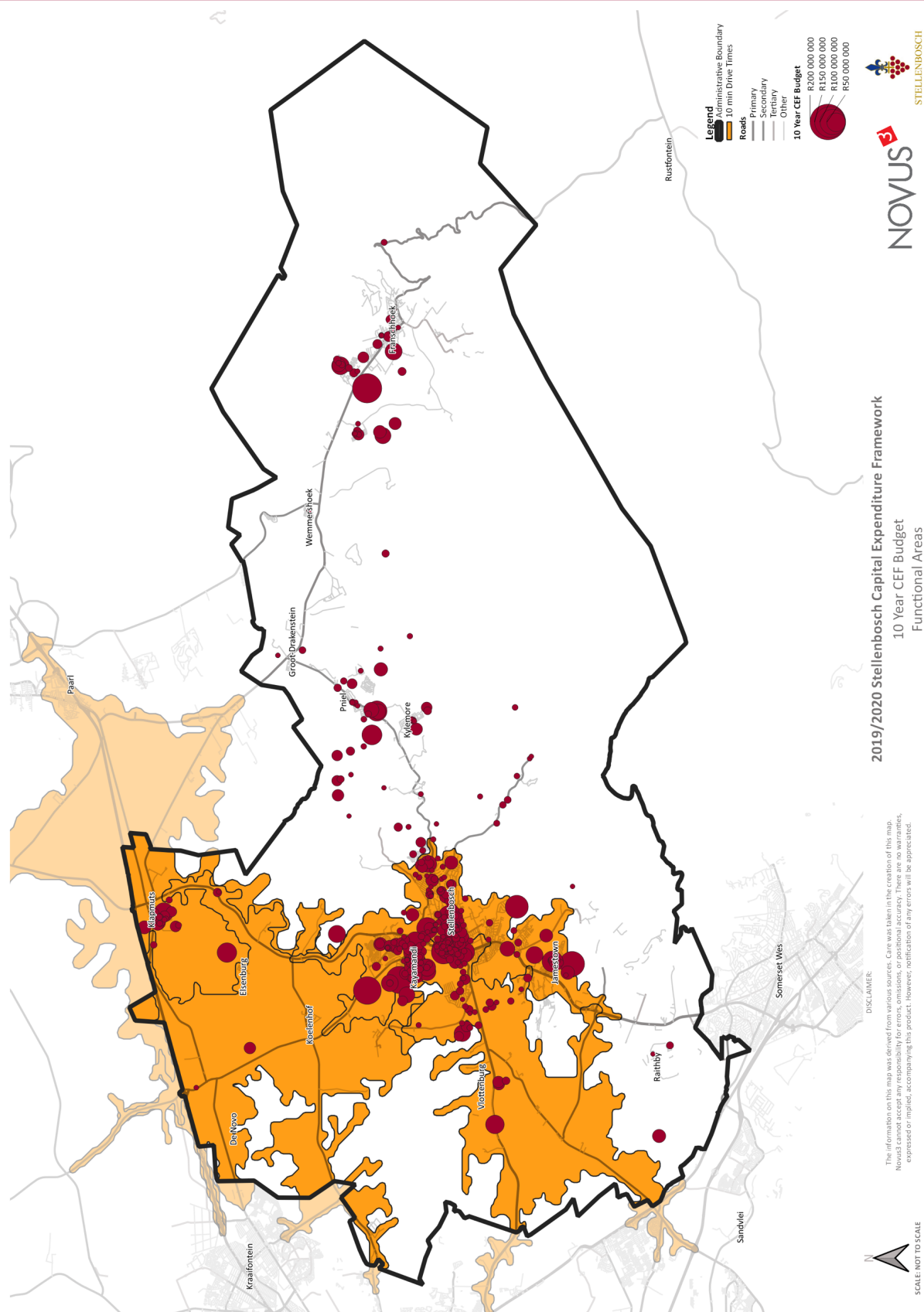
Functional Area Intersect	2025/26	2026/27	2027/28	2028/29	Total	Percentage
Administrative HQ	R 23 704 000	R 30 478 000	R 23 945 001	R 64 730 000	R 385 564 101	6%
City Wide	R 54 384 630	R 54 694 630	R 54 965 908	R 18 938 462	R 679 051 459	11%
Klappmuts Functional Area	R 35 466 534	R 40 810 897	R 13 426 415	R 2 120 492	R 256 425 626	4%
Koelenhof Functional Area	R 147 213 975	R 195 592 806	R 172 053 784	R 168 519 343	R 1 355 639 825	22%
No Intersect	R 20 018	R 20 365	R 57 281	R -	R 744 204	0%
Not Mapped	R 5 000 000	R -	R 3 000 000	R 5 600 000	R 33 195 000	1%
Outside Functional Area	R 47 983 682	R 51 670 387	R 39 159 703	R 40 948 088	R 742 722 133	12%
Stellenbosch Functional Area	R 233 887 255	R 267 971 916	R 290 689 010	R 305 879 584	R 2 142 067 211	34%
Vlottenburg Functional Area	R 85 762 365	R 69 618 841	R 120 055 905	R 164 403 041	R 694 657 134	11%
Grand Total	R 633 422 458	R 710 857 841	R 717 353 007	R 771 139 011	R 6 290 066 694	100%

Table 80: Programme totals per Functional Area

- From Table 80 it can be seen that 34% of the 10 year capital expenditure will occur in the Stellenbosch Functional Area, followed by 22% in the Koelenhof Functional Area. 11% of the capital expenditure will be allocated to Vlottenburg and Klappmuts respectively. Considering the Investment paradigm of Stellenbosch, it is evident that Capital expenditure has been guided by the Prioritisation and budget scenario mechanisms towards the desired urban form. Finally, 12% of the capital expenditure are allocated outside the urban form, which then realises to the principle of spatial justice.

Please note the following:

- Duplication of a project's budget is possible as the functional area, based on a 10 minute drive time overlap between most of the identified functional areas;
- No intersect refers to a portion of projects that falls outside the municipality's jurisdiction, and;
- Not Mapped refers to projects that that do not have geo-spatial data.



Map 24: Functional Area Programme based analysis

10.4 Priority Development Areas Budget Split

For this part of this section, the 2019/2020 capital expenditure framework has been expressed in terms of the Priority Development Areas. It seeks to identify the degree of spatial targeting achieved by the municipality.

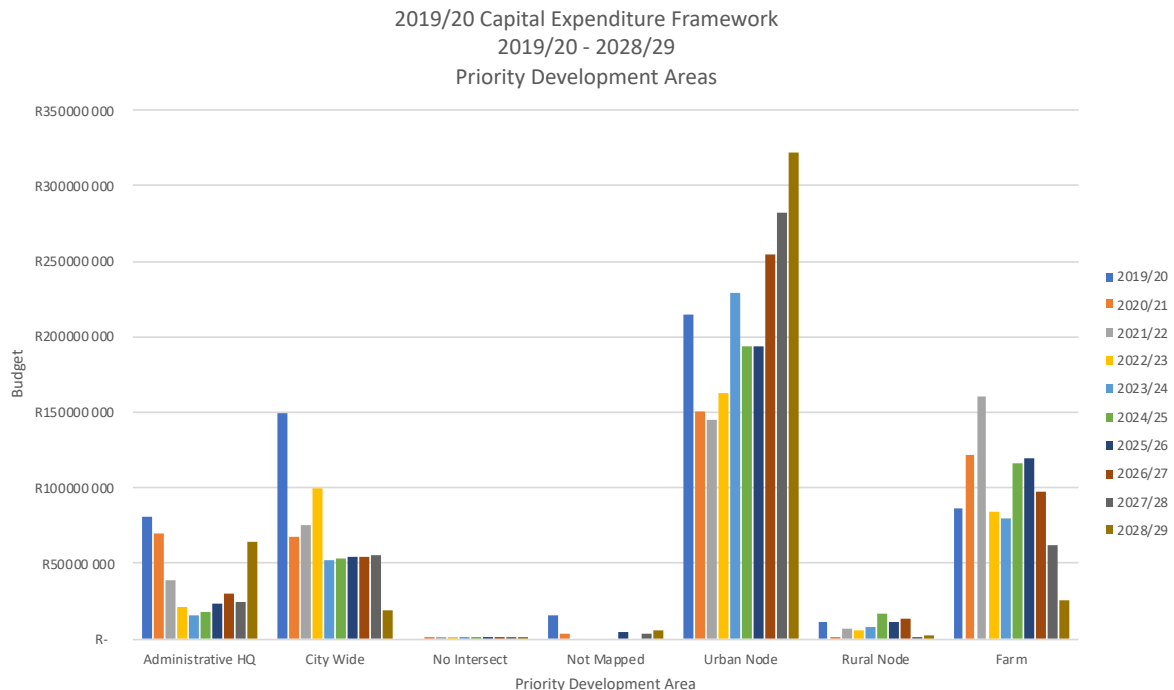


Figure 97: Programme totals per Priority Development Area

Priority Development Area	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Administrative HQ	R80 665 000	R69 686 800	R38 476 800	R20 770 000	R15 434 000	R17 674 500
City Wide	R149 405 000	R67 110 000	R75 000 900	R99 431 754	R52 125 619	R52 994 556
No Intersect	R0	R32 353	R364 507	R1 000 673	R308 573	R149 767
Not Mapped	R15 845 000	R3 750 000	R-	R-	R-	R-
Urban Node	R214 729 271	R150 723 709	R145 569 206	R162 704 954	R229 248 891	R193 248 176
Rural Node	R10 758 294	R1 377 683	R6 614 832	R5 653 375	R7 781 881	R16 699 421
Farm	R86 873 964	R121 932 215	R160 311 455	R84 435 999	R80 078 755	R116 241 537
Grand Total	R558 276 528	R414 612 759	R426 337 700	R373 996 754	R384 977 719	R397 007 956
Priority Development Area	2025/26	2026/27	2027/28	2028/29	Total	Percentage
Administrative HQ	R23 704 000	R30 478 000	R23 945 001	R64 730 000	R385 564 101	9%
City Wide	R54 384 630	R54 694 630	R54 965 908	R18 938 462	R679 051 459	16%
No Intersect	R76 013	R71 255	R201 113	R4 367	R2 208 620	0%
Not Mapped	R5 000 000	R-	R3 000 000	R5 600 000	R33 195 000	1%
Urban Node	R194 100 425	R254 252 276	R282 716 125	R322 403 360	R2 149 696 394	50%
Rural Node	R11 026 138	R13 281 797	R100 728	R2 402 006	R75 696 153	2%
Farm	R119 688 324	R97 719 672	R62 082 034	R25 917 911	R955 281 867	22%
Grand Total	R407 979 530	R450 497 630	R427 010 909	R439 996 106	R4 280 693 593	100%

Table 81: Programme total per Priority Development Areas

50% of the municipality's capital expenditure are assigned to the Urban Node Area, with only 24% allocated to Rural and Farm areas, which leaves the municipality with the remainder of the budget (equal to one MTREF) as Administrative HQ or City wide.

Please note the following:

- Duplication of a project's budget is possible as the functional area, based on a 10 minute drive time overlap between most of the identified functional areas;
- No intersect refers to a portion of projects that falls outside the municipality's jurisdiction, and;

-
- 2019/2020 Stellenbosch Capital Expenditure Framework**
- ### 10 Year CEF Budget
- #### Priority Development Areas
- Legend**
- Roads
 - Primary
 - Secondary
 - Tertiary
 - Other
 - Administrative Boundary
 - Priority Development Area
 - Farms
 - Rural
 - Urban
 - Other
- 10 Year CEF Budget**
- R200 000 000
 - R150 000 000
 - R100 000 000
 - R50 000 000
- Scale:** 0 to 10 km
- Disclaimer:** This information was derived from various sources. Capeweb takes no responsibility for errors or omissions. No warranty is made as to the accuracy of the information. However, notification of any errors will be appreciated.
- NOVUS**
- STELLENBOSCH**

Map 25: Priority Development area based analysis

10.5 Ward based Budget Split

For this part of this section, the 2019/2020 capital expenditure framework has been expressed in terms of the municipality's wards. It seeks to identify the degree of spatial targeting achieved by the municipality.

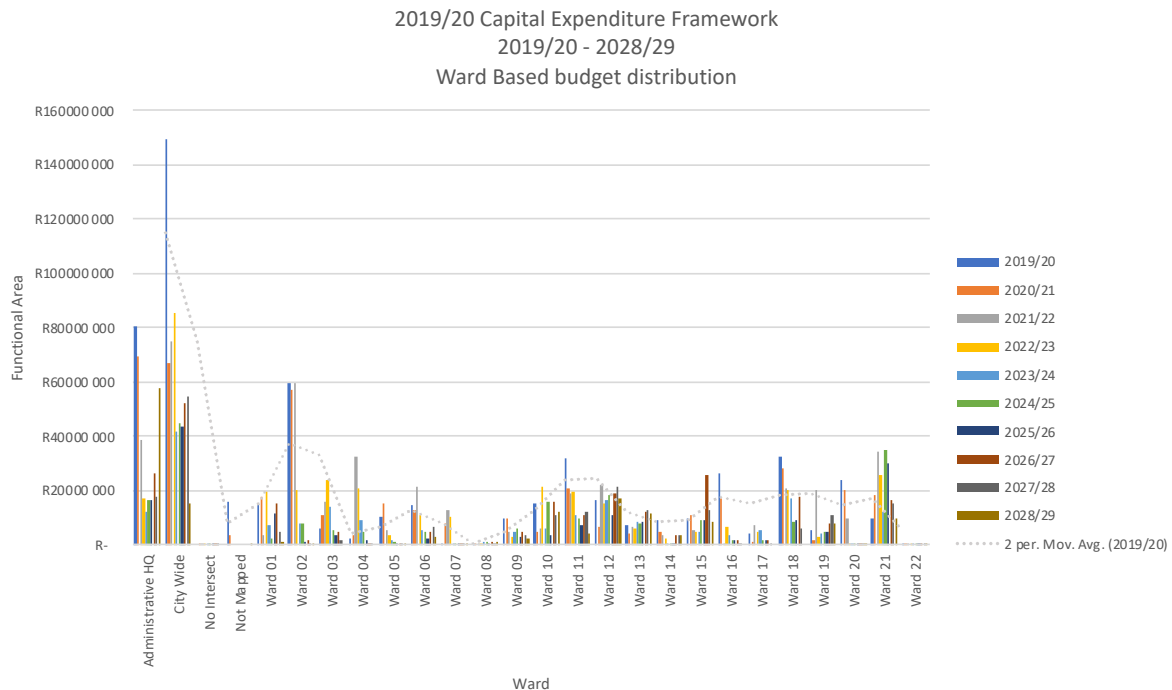


Figure 98: Programme totals per Ward

Ward	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Administrative HQ	R 80 665 000	R 69 686 800	R 38 476 800	R 17 055 000	R 11 969 000	R 16 659 500
City Wide	R 149 405 000	R 67 110 000	R 75 000 900	R 85 537 754	R 41 405 619	R 45 074 556
No Intersect	R 0	R 32 310	R 364 074	R 337 694	R 231 727	R 140 280
Not Mapped	R 15 845 000	R 3 750 000	R -	R -	R -	R -
Ward 01	R 15 136 801	R 17 576 699	R 3 508 902	R 19 851 090	R 7 451 611	R 2 521 926
Ward 02	R 59 710 778	R 56 916 906	R 59 538 239	R 20 222 732	R 8 137 113	R 7 838 419
Ward 03	R 6 146 664	R 10 996 489	R 15 906 388	R 23 666 078	R 13 845 321	R 5 324 714
Ward 04	R 2 329 112	R 3 535 919	R 32 769 843	R 20 527 757	R 9 327 272	R 4 749 423
Ward 05	R 10 600 613	R 14 976 065	R 5 496 259	R 3 696 690	R 1 430 334	R 1 228 813
Ward 06	R 14 532 984	R 12 952 749	R 21 266 458	R 10 653 585	R 5 211 060	R 5 027 534
Ward 07	R 645 336	R 7 835 094	R 12 987 865	R 10 073 327	R 355 331	R 326 159
Ward 08	R 210 965	R 340 247	R 108 176	R 82 225	R 827 197	R 869 860
Ward 09	R 9 847 247	R 9 433 020	R 4 993 556	R 2 798 462	R 4 550 475	R 5 857 551
Ward 10	R 15 491 993	R 4 666 230	R 6 003 097	R 21 475 514	R 5 817 331	R 16 176 045
Ward 11	R 32 164 357	R 20 836 472	R 18 671 648	R 19 341 932	R 10 814 521	R 9 630 130
Ward 12	R 16 751 492	R 6 422 099	R 21 957 566	R 15 327 099	R 16 765 377	R 18 574 153
Ward 13	R 7 291 502	R 4 400 145	R 6 691 078	R 5 945 080	R 8 445 763	R 7 656 593
Ward 14	R 9 083 810	R 4 711 258	R 3 849 614	R 2 223 262	R 341 866	R 6 087
Ward 15	R 9 575 877	R 11 193 248	R 5 236 570	R 4 855 619	R 5 050 698	R 8 883 468
Ward 16	R 26 188 612	R 16 988 613	R 476 265	R 6 830 765	R 3 500 889	R 1 498 880
Ward 17	R 4 061 006	R 1 131 619	R 7 082 802	R 4 663 939	R 5 375 986	R 1 445 616
Ward 18	R 32 183 041	R 28 034 256	R 21 083 714	R 20 084 175	R 16 984 175	R 8 284 175
Ward 19	R 5 646 109	R 1 856 204	R 19 945 727	R 2 849 024	R 4 424 257	R 4 813 517
Ward 20	R 24 000 730	R 20 009 713	R 10 012 780	R 12 172	R 12 172	R 12 172
Ward 21	R 10 018 149	R 18 472 940	R 34 505 187	R 26 014 067	R 12 020 287	R 35 023 571
Ward 22	R 744 695	R 748 516	R 408 591	R 327 711	R 79 239	R 310 916
Grand Total	R 558 276 875	R 414 613 608	R 426 342 099	R 344 452 755	R 194 374 619	R 207 934 057

Ward	2025/26	2026/27	2027/28	2028/29	Total	Percentage
Administrative HQ	R 16 603 000	R 26 503 000	R 17 720 001	R 57 605 000	R 352 943 101	12%
City Wide	R 43 844 630	R 52 194 630	R 54 665 908	R 15 438 462	R 629 677 459	22%
No Intersect	R 66 542	R 66 888	R 196 851	R 1	R 1 436 367	0%
Not Mapped	R -	R -	R -	R 450 000	R 20 045 000	1%
Ward 01	R 11 718 598	R 15 177 935	R 4 872 051	R 1 304 525	R 99 120 137	3%
Ward 02	R 1 305 114	R 1 674 337	R 570 609	R 195 475	R 216 109 723	7%
Ward 03	R 3 652 045	R 4 826 364	R 1 564 801	R -	R 85 928 863	3%
Ward 04	R 1 602 898	R 125 106	R 153 241	R -	R 75 120 571	3%
Ward 05	R 191 478	R 595 918	R 579 318	R 354 496	R 39 149 983	1%
Ward 06	R 2 285 139	R 4 957 260	R 6 382 944	R 2 655 594	R 85 925 307	3%
Ward 07	R 15 023	R 321 260	R 25 677	R 302 434	R 32 887 507	1%
Ward 08	R 5 038	R 809 542	R 6 188	R 803 228	R 4 062 666	0%
Ward 09	R 2 954 641	R 4 531 740	R 3 705 699	R 2 025 924	R 50 698 314	2%
Ward 10	R 3 822 190	R 16 126 458	R 10 994 734	R 12 301 784	R 112 875 378	4%
Ward 11	R 7 497 553	R 10 993 051	R 12 333 891	R 3 945 388	R 146 228 943	5%
Ward 12	R 11 104 856	R 18 908 135	R 21 698 187	R 17 190 722	R 164 699 686	6%
Ward 13	R 8 620 189	R 11 994 936	R 12 823 058	R 11 313 823	R 85 182 167	3%

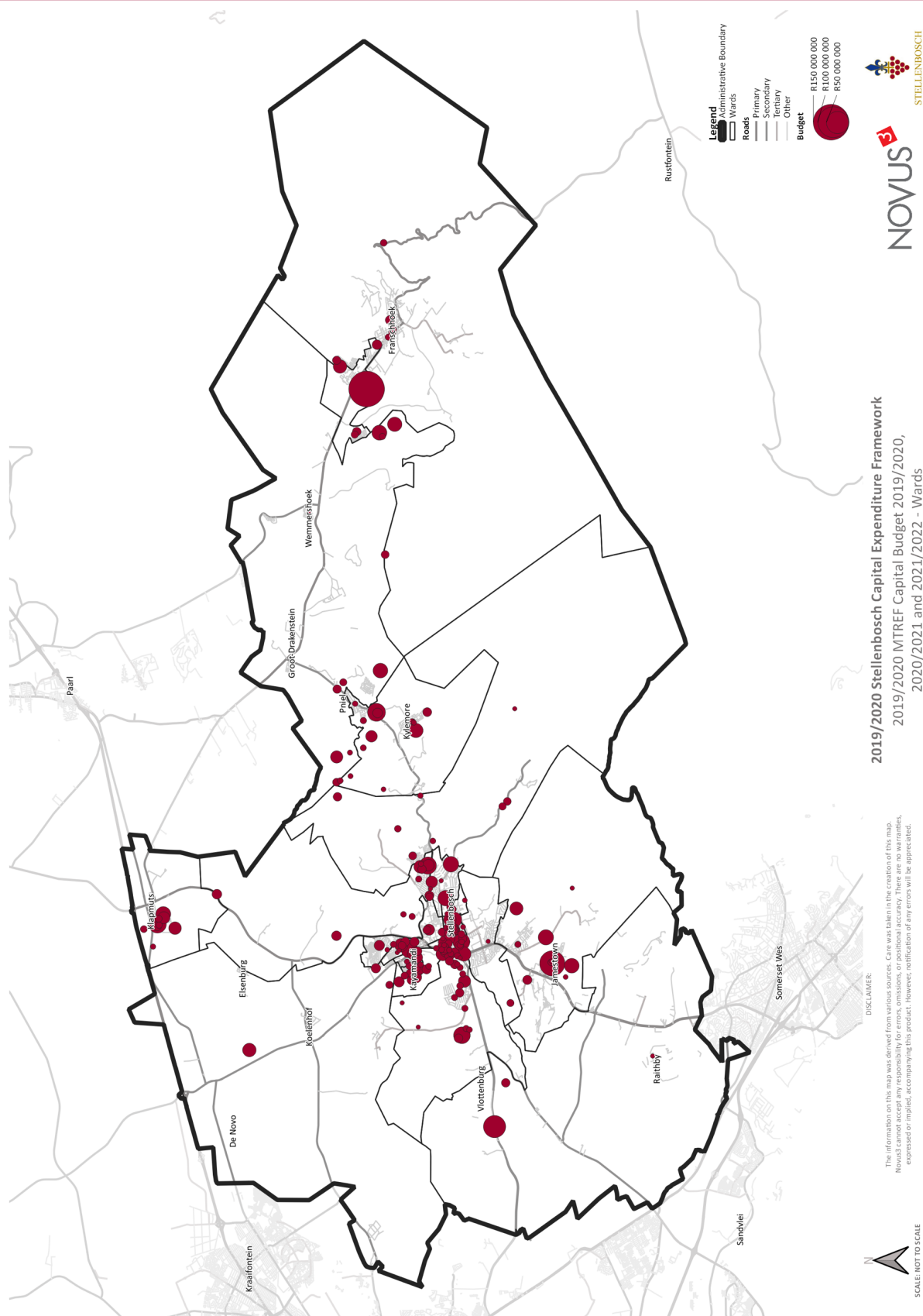
Ward		2019/20		2020/21		2021/22		2022/23		2023/24		2024/25
Ward 14	R	5 929	R	3 465 785	R	3 747 971	R	3 747 938	R	31 183 521	1%	
Ward 15	R	8 882 937	R	25 856 584	R	12 837 433	R	8 395 712	R	100 768 146	3%	
Ward 16	R	1 496 482	R	1 516 825	R	5 011	R	-	R	58 502 341	2%	
Ward 17	R	1 441 108	R	1 674 083	R	9 074	R	-	R	26 885 233	1%	
Ward 18	R	9 187 588	R	18 017 088	R	6 101 263	R	-	R	159 959 474	5%	
Ward 19	R	4 802 464	R	7 677 311	R	10 683 087	R	8 009 118	R	70 706 817	2%	
Ward 20	R	6 086	R	20 084	R	18 258	R	12 172	R	54 116 339	2%	
Ward 21	R	30 019 996	R	16 515 851	R	14 991 019	R	9 987 828	R	207 568 895	7%	
Ward 22	R	36 608	R	47 460	R	449 636	R	403 838	R	3 557 210	0%	
Grand Total	R	171 168 131	R	244 597 632	R	197 135 910	R	156 443 462	R	2 915 339 147	100%	

Table 82: Programme total per Ward

34% Of the municipality's capital expenditure are assigned to assets of an Administrative HQ or City wide nature. This means that 66% of the budget should be distributed between 22 ward.

Please note the following:

- Duplication of a project's budget is possible as the query layer contain delineations of different PDA's which overlaps at the same spot;
- No intersect refers to a portion of projects that falls outside the municipality's jurisdiction, and, and;
- Not Mapped refers to projects that that do not have geo-spatial data.



Map 26: Priority Development area based analysis

10.6 Discipline based Budget Split

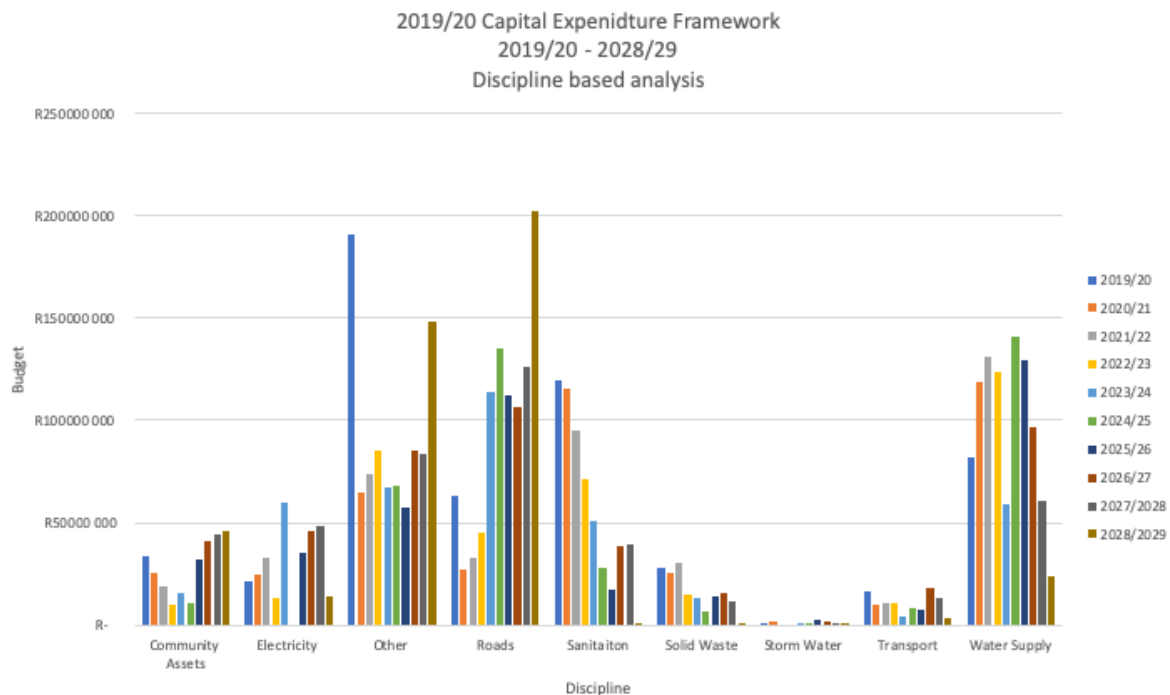


Figure 99: 2019/2020 MTREF Capital budget focussed on basic service delivery

Table 83: 2019/2020 MTREF Capital Budget focussed on basic service delivery

Discipline	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Community Assets	R 34 025 000	R 25 295 000	R 19 270 000	R 9 995 000	R 16 030 000	R 10 460 000
Electricity	R 21 380 000	R 24 700 000	R 33 000 000	R 12 800 000	R 60 000 000	R
Other	R 191 200 000	R 65 166 800	R 73 686 800	R 85 554 000	R 67 562 100	R 68 113 400
Roads	R 63 500 000	R 27 000 000	R 32 800 000	R 44 950 000	R 114 000 000	R 134 900 000
Sanitation	R 119 800 000	R 115 884 431	R 94 700 000	R 71 200 000	R 50 700 000	R 27 750 000
Solid Waste	R 28 300 000	R 25 500 000	R 30 500 000	R 14 900 000	R 13 100 000	R 6 500 000
Storm Water	R 1 000 000	R 2 000 000	R -	R -	R 200 000	R 200 000
Transport	R 16 720 000	R 10 300 000	R 11 000 000	R 10 800 000	R 4 470 000	R 8 000 000
Water Supply	R 82 351 528	R 118 766 528	R 131 380 900	R 123 797 754	R 58 915 619	R 141 084 556
Grand Total	R 558 276 528	R 414 612 759	R 426 337 700	R 373 996 754	R 384 977 719	R 397 007 956
Discipline	2025/26	2026/27	2027/2028	2028/2029	Total	%
Community Assets	R 31 900 000	R 41 200 000	R 44 450 000	R 46 215 000	R 278 840 000	7%
Electricity	R 35 600 000	R 46 200 000	R 48 800 000	R 14 275 644	R 296 755 644	7%
Other	R 57 299 700	R 85 268 000	R 83 635 001	R 148 422 000	R 925 907 801	22%
Roads	R 112 225 200	R 106 875 000	R 125 800 000	R 202 510 000	R 964 560 200	23%
Sanitation	R 17 250 000	R 38 500 000	R 39 550 000	R 550 000	R 575 884 431	13%
Solid Waste	R 14 300 000	R 15 500 000	R 11 300 000	R 500 000	R 160 400 000	4%
Storm Water	R 2 200 000	R 2 100 000	R 100 000	R 100 000	R 7 900 000	0%
Transport	R 7 600 000	R 18 000 000	R 13 000 000	R 3 775 000	R 103 665 000	2%
Water Supply	R 129 604 630	R 96 854 630	R 60 375 908	R 23 648 462	R 966 780 515	23%
Grand Total	R 407 979 530	R 450 497 630	R 427 010 909	R 439 996 106	R 4 280 693 591	100%

23% of the CEF are assigned to Roads as well as Water supply disciplines respectively. Of concern is that no asset type that relates to Storm water are noted – however this could be a function of classification, rather than actual projects not enjoying any capital in this regard. Community Assets and Electricity services are both only enjoying 7% of the capital expenditure. The discipline based budget split has been compiled based on the MSCOA project segment category per project. Please refer to Table 84 below:

Table 84: MSCOA – Type Category and Discipline relationship

Discipline	MSCOA - Type Category
Community Assets	Community Assets
Community Assets	Libraries
Electricity	Electrical Infrastructure
Roads	Roads Infrastructure

Discipline	MSCOA - Type Category
Sanitation	Sanitation Infrastructure
Solid Waste	Solid Waste Infrastructure
Storm Water	Storm water Infrastructure
Transport	Transport Assets
Water Supply	Water Supply Infrastructure
Other	Biological or Cultivated Assets
Other	Computer Equipment
Other	Expanded Public Works Programme
Other	Furniture and Office Equipment
Other	Heritage Assets
Other	Indigent and Cultural Management and Services
Other	Information and Communication Infrastructure
Other	Intangible Assets
Other	Investment Properties
Other	Machinery and Equipment
Other	Other Assets
Other	Spatial Planning
Other	Strategic Management and Governance
Other	(blank)

10.7 Asset type budget split

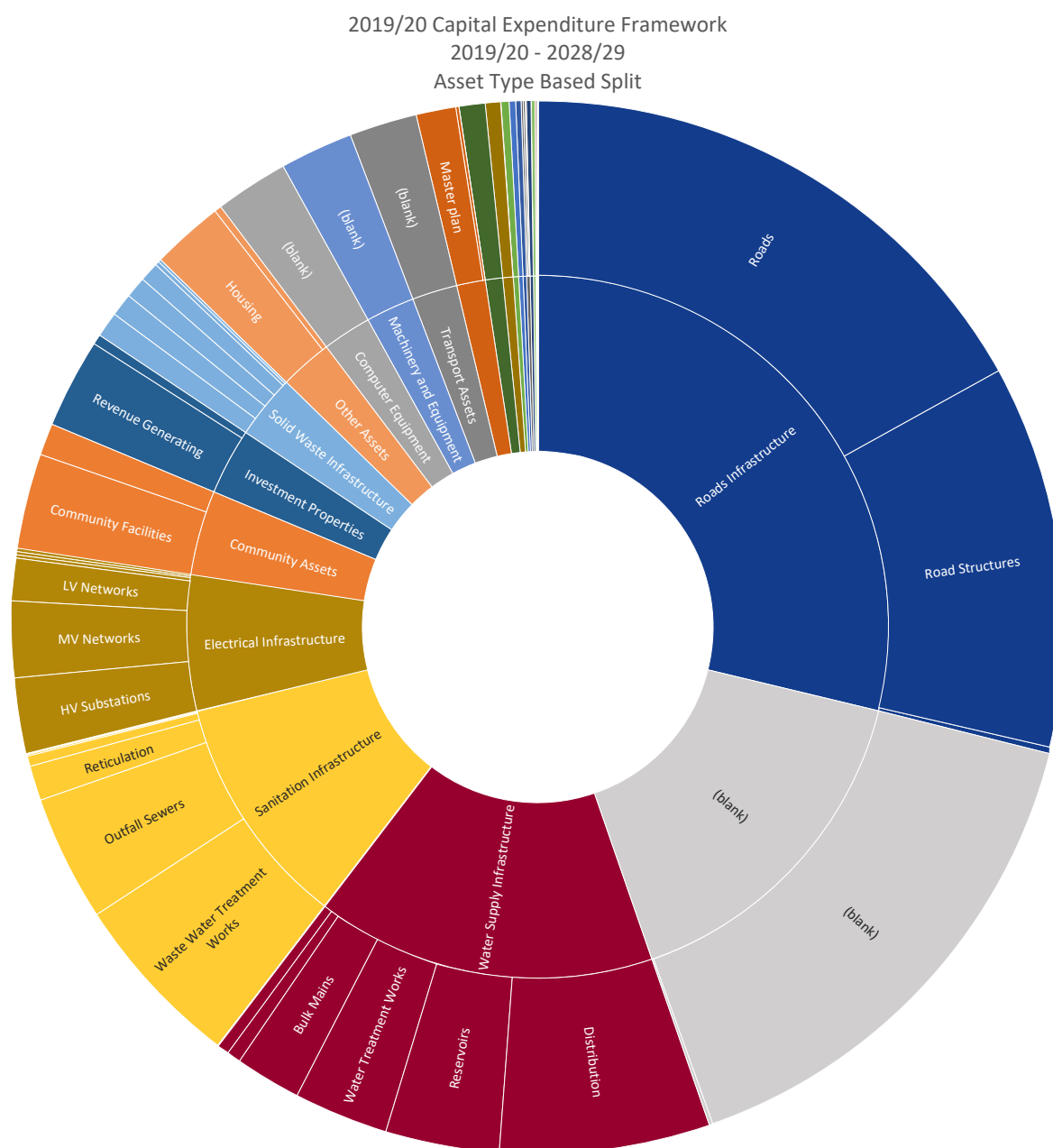


Figure 100: 2019/20 – 2028/29 Asset type budget split

From the sunburst diagram it is clear that Roads Infrastructure and Water Supply Asset types represent almost half of the 10 year capital expenditure framework, with another quarter of the said framework allocated to Community Assets, electrical infrastructure and Sanitation Infrastructure. It should be noted that the category “blank” refers to two options. Firstly, the option exist that not all information are captured. Secondly, the option exists that the selection are at its lowest reporting level, leaving the next selection redundant and so not possible – relating “blank” classifications.

10.8 Poor vs Non Poor Expenditure

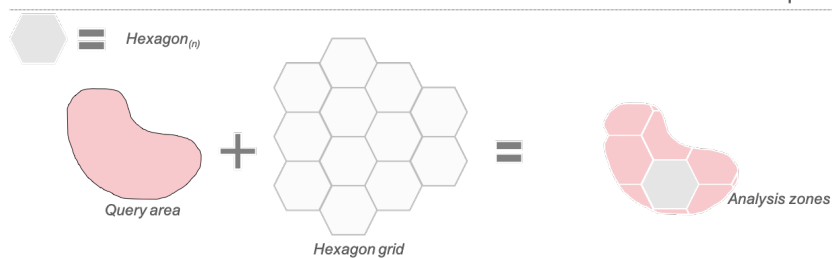
The IUDF guides municipalities to reconfigure urban spaces, from the inherited segregated spatial structure form to an integrated and optimally functional built environment. In order to do that noteworthy steps should be taken toward redeveloping and reconfiguring the spatial structure of today. One step towards achieving the vision of the IUDF is to identify the capital expenditure towards poor and non poor communities. The CEF guidelines, in this regard, claims that a municipality should have the ability to report on the percentage of capital expenditure in poor versus non poor areas. This is however a difficult task for the following reasons:

- The definition of “poor” vs “non-poor” is not clear;
- The definition of an “indigent” population is broadly defined;
- Municipal wide information that relates to metrics qualifying one as “indigent” is not commonly available;
- Various criticism exists for only using income as a measure as it does not necessarily relate to elements such as housing structures, access to services, levels of services, education, population density, household dynamics etc;
- The majority of data sources relies on pseudo-realistic interpretations of the number of people within a specific area, and;
- By framing the question of poor vs non-poor expenditure with respect to the current urban form, together with the principle to increase capital expenditure in non-poor areas, forces the municipality to perpetuate the segregates spatial structure.
- Regardless of the technical pitfalls noted above, it is still possible to take a relative simplistic view on where the poor and non-poor population is situated within the municipality, followed by where the capital expenditure occurs which enables the municipality to determine the poor vs non-poor capital expenditure ratio.

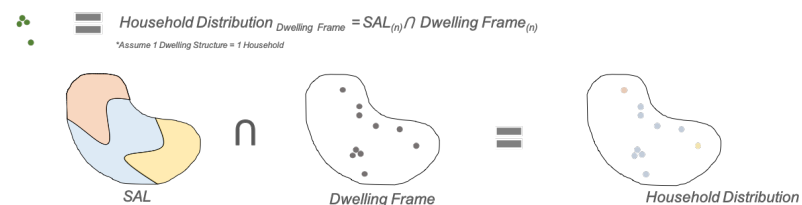
10.8.1 Step-wise process to calculate the poor vs non-poor capital expenditure ratio

- The following section will plot the process used to calculate the poor vs non-poor capital expenditure ratio.
 - Step 1: Generate 500m hexagon grid
 - Step 2: Determine household distribution
 - Step 3: Identify households per hexagon
 - Step 4: Calculate household income ratio per hexagon
 - Step 5: Calculate capital expenditure per hexagon
 - Step 6: Calculate capital expenditure per income class

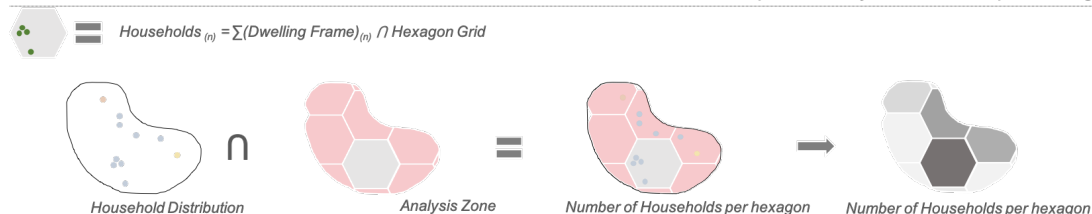
Step 1: Generate 500m hexagon grid



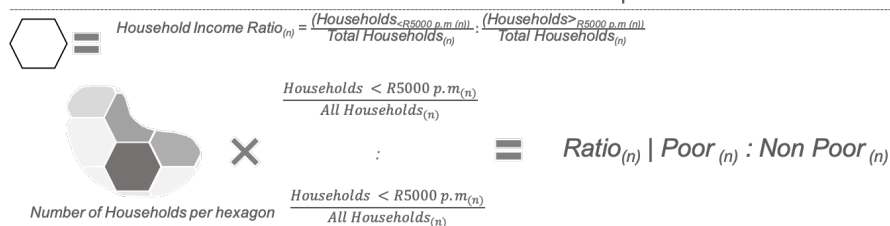
Step 2: Determine household distribution



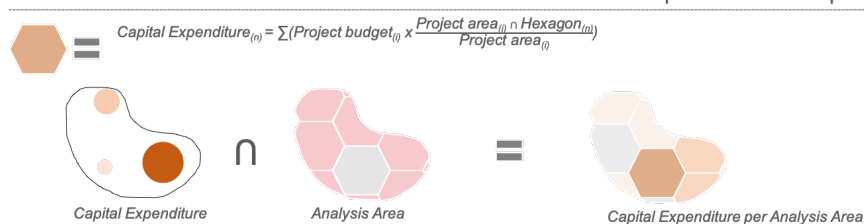
Step 3: Identify households per hexagon



Step 4: Calculate household income ratio per hexagon



Step 5: Calculate capital expenditure per hexagon



Step 6: Calculate capital expenditure per income class

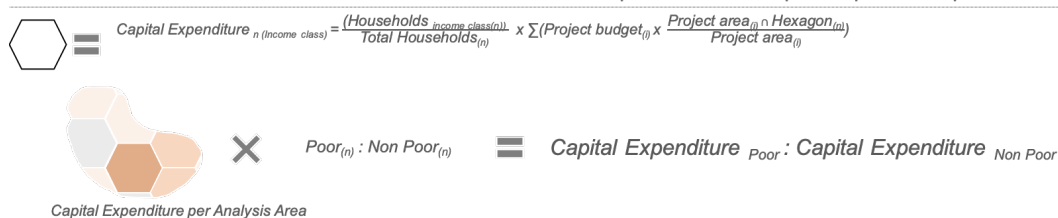


Figure 101: Poor vs Non-Poor calculation process

10.8.2 Poor vs non-poor capital expenditure ratio

- The following section will discuss the results after applying the poor vs non poor calculation methodology.

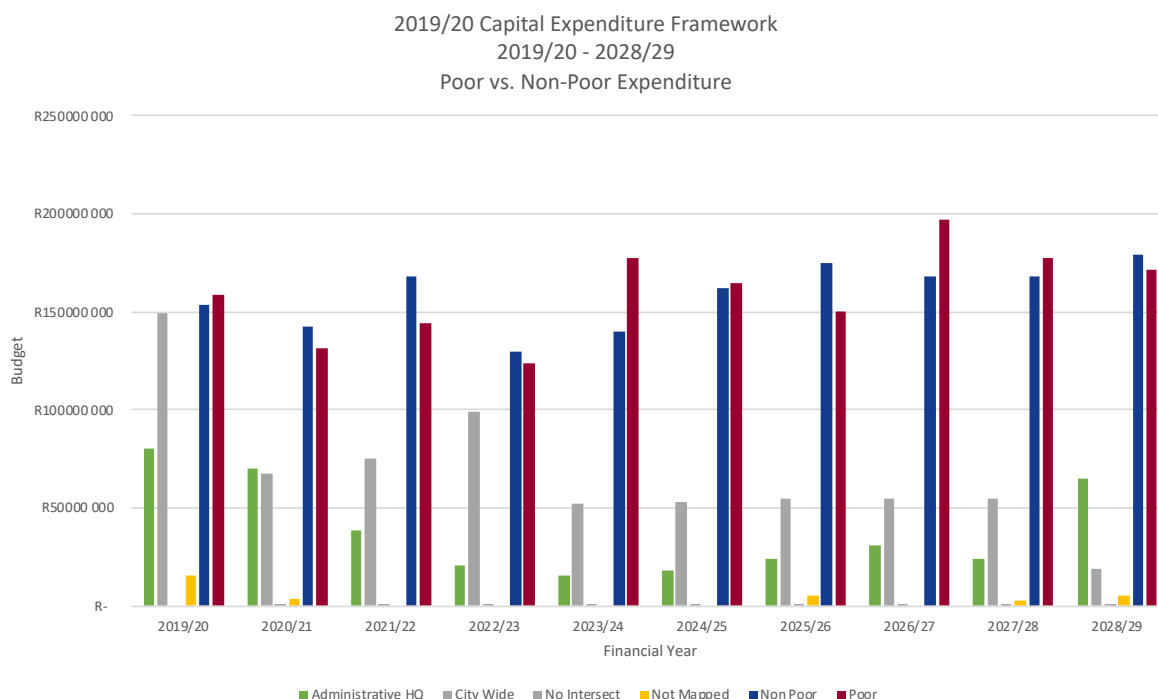


Figure 102: Poor : Non Poor capital expenditure ratio

Table 85: Poor : Non Poor capital expenditure ratio

	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Administrative HQ	R80 665 000	R69 686 800	R38 476 800	R20 770 000	R15 434 000	R17 674 500
City Wide	R149 405 000	R67 110 000	R75 000 900	R99 431 754	R52 125 619	R52 994 556
No Intersect	R2	R390	R35 397	R832 427	R165 433	R118 697
Not Mapped	R15 845 000	R3 750 000	R-	R-	R-	R-
Non Poor	R153 759 589	R142 545 595	R168 409 728	R129 592 592	R139 818 431	R161 911 131
Poor	R158 601 940	R131 519 975	R144 414 876	R123 369 982	R177 434 237	R164 309 076
Total	R558 276 530	R414 612 761	R426 337 702	R373 996 754	R384 977 720	R397 007 960
Poor : Non Poor	1 : 1	1 : 0,9	1 : 0,9	1 : 1	1 : 1,3	1 : 1
	2025/26	2026/27	2027/28	2028/29	Total	%
Administrative HQ	R23 704 000	R30 478 000	R23 945 001	R64 730 000	R385 564 101	9%
City Wide	R54 384 630	R54 694 630	R54 965 908	R18 938 462	R679 051 459	16%
No Intersect	R63 485	R58 848	R169 270	R3 631	R1 447 580	0%
Not Mapped	R5 000 000	R-	R3 000 000	R5 600 000	R33 195 000	1%
Non Poor	R174 772 759	R168 374 089	R167 751 552	R179 513 659	R1 586 449 125	37%
Poor	R150 054 657	R196 892 066	R177 179 180	R171 210 355	R1 594 986 344	37%
Total	R407 979 531	R450 497 632	R427 010 911	R439 996 107	R4 280 693 608	100%
Poor : Non Poor	1 : 0,9	1 : 1,2	1 : 1,1	1 : 1	1 : 1	1 : 1

The most significant finding of the results are that over the next ten years, for every rand spent on the non-poor, a rand will be spent on pro-poor areas and people. There are three financial years in which this ration slightly leans towards a favourable outcome for the poor, and only two instances where it is the reserve. This is a good indication for integrated planning and equitable expenditure – specifically deriving from the principles of spatial targeting.

Section 11 Capital Expenditure Implementation Plan



11 Capital Expenditure Implementation Plan

11.1 Contextualisation

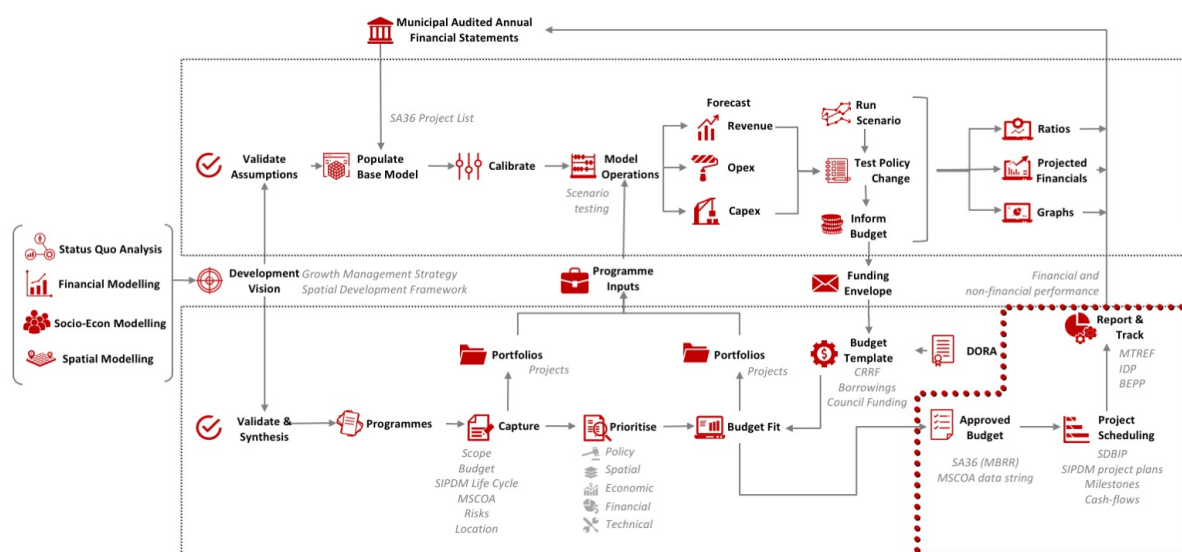


Figure 103: Capital Expenditure Implementation Plan

Once the ten year Capital Expenditure Framework has been set up as a result of the prioritisation and budget scenario process, a three year Capital Expenditure Implementation follows. In order to manage Capital Expenditure Implementation, National Government, through the MFMA has established the Medium Term Revenue and Expenditure Framework (MTREF). The MTREF is a rolling three-year expenditure planning tool and defines the expenditure priorities for a period of three years.

This section depicts the first three years of implementation. It show an estimation of the following implementation frameworks, however, one must take cognisance of the fact that the municipal planning and implementation process is ongoing and that the implementation framework will be adjusted as new capital demand is introduced to the Capital Expenditure Framework.

It is important to note that the Capital Expenditure Framework process must be aligned with the municipal budgeting process. This document will be submitted for approval with the final MTREF budget. The first three year therefore align 100% with the MTREF budget.

11.2 2019/2020 – 2021/22 Budget Analysis

The budget analysis will be done in terms of the total Capital Expenditure Framework. In some instance capital expenditure in the MTREF might seem without goal, but understanding that the budget is drafted with a ten year Capital Expenditure Framework in mind, it will be easier to rationalise several findings.

Given that the whole budgeting process up to this point has been done with the assistance of the CP3 platform, it is now possible to analyse the budget not only in terms of the total Capital Expenditure Framework, but also in terms of key project related information. It is therefore essential to plan on a project level – this enables to grouping and analysis of several project attributes.

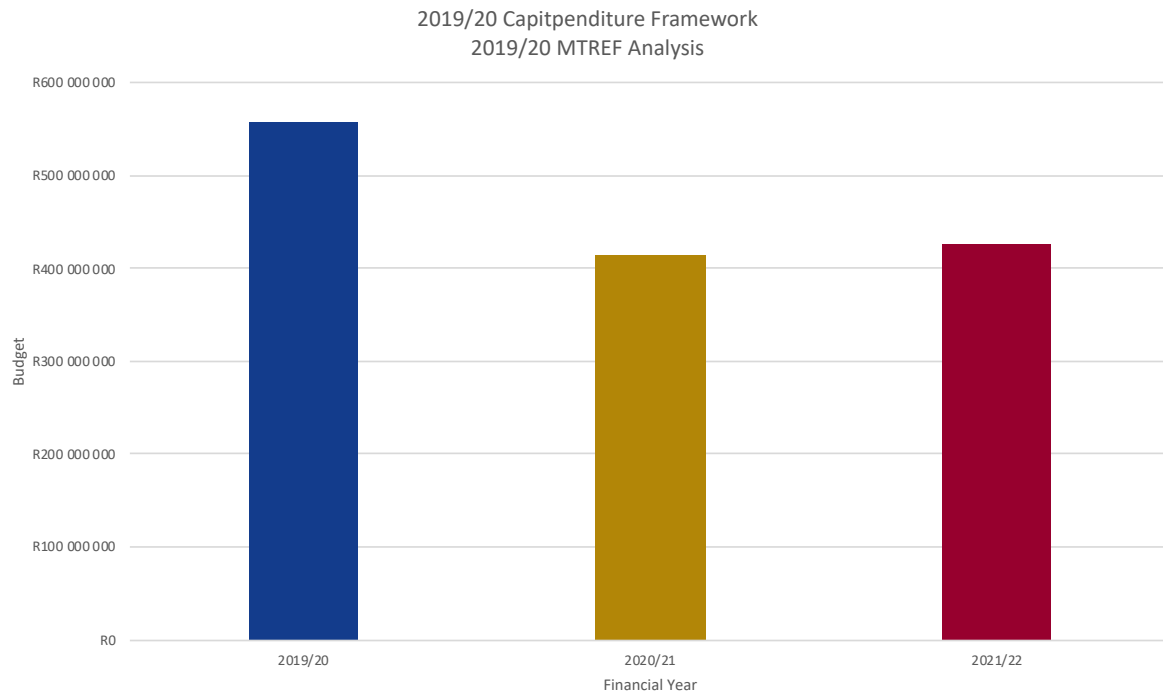
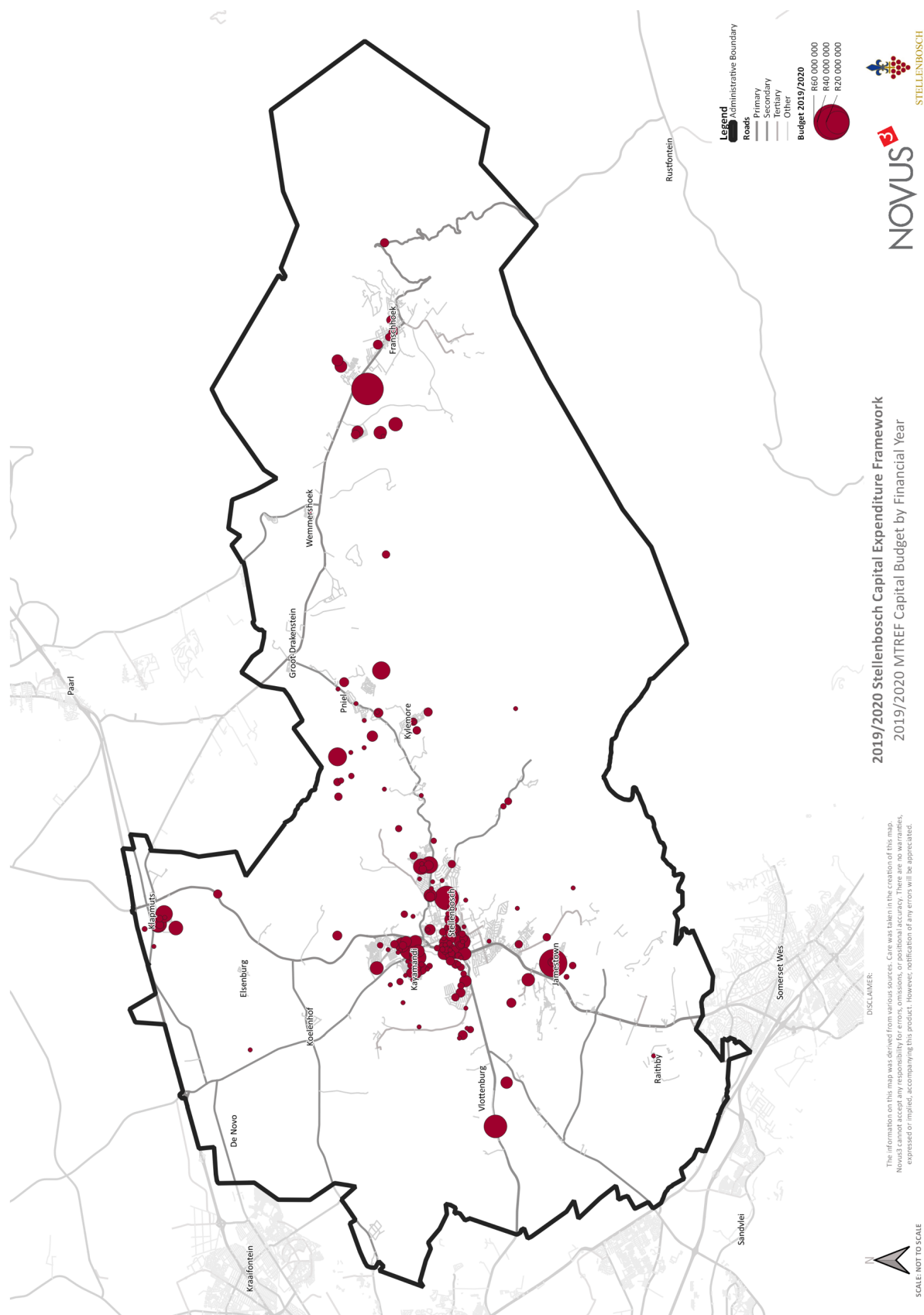


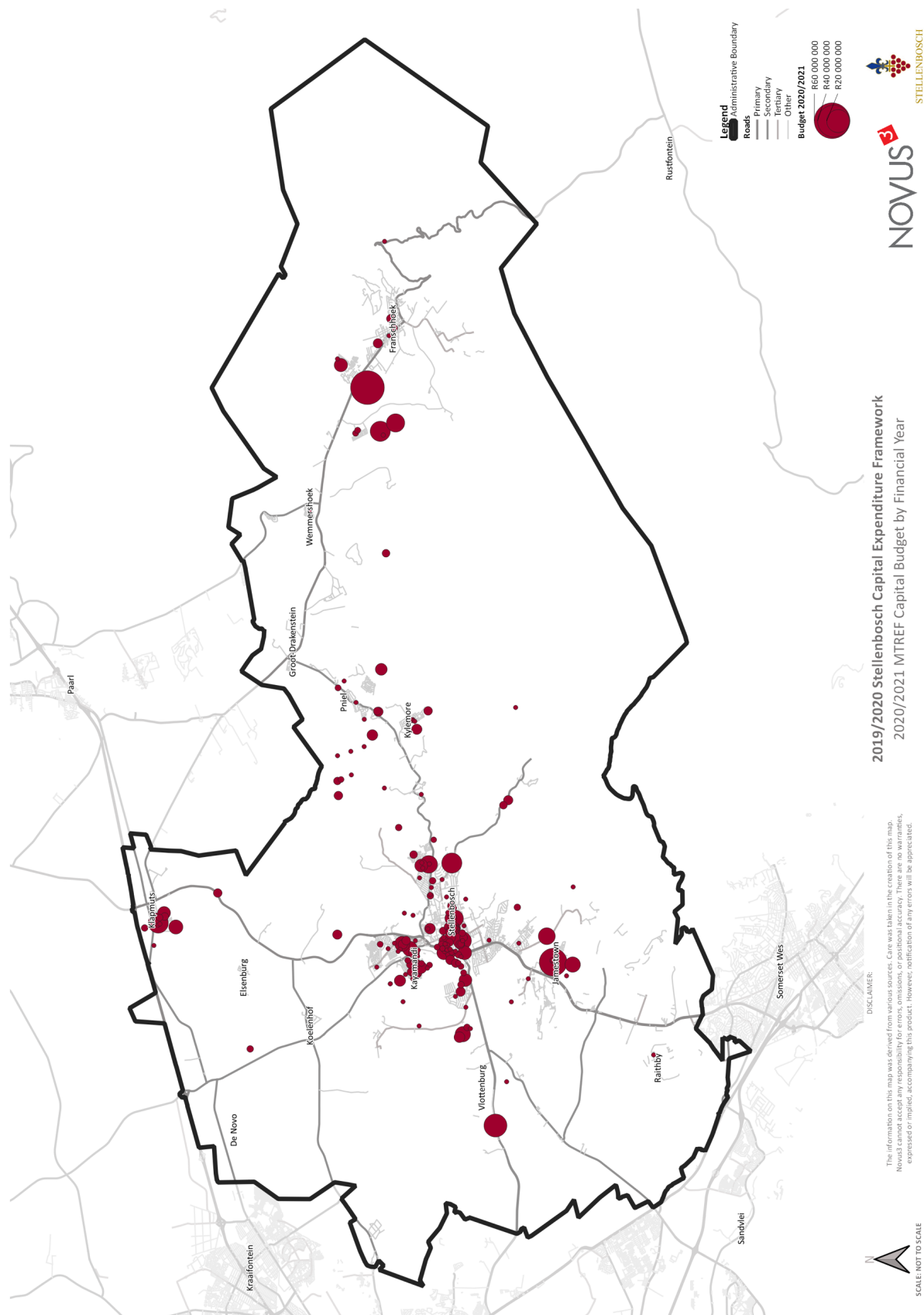
Figure 104: 2019/20 MTREF Annual Summary

The rather simplistic figure in Figure 104 shows the first three years of capital expenditure of Stellenbosch, starting 2019/20. Observed from the figure is that the first financial year represents an increase in capital expenditure compared to the next two (and previous two) financial years. It must be noted that this heightened capital expenditure in the first financial year is due to the implementation of a specific project within the municipality. The maps below shows the spatial distribution across the municipality during the three financial years

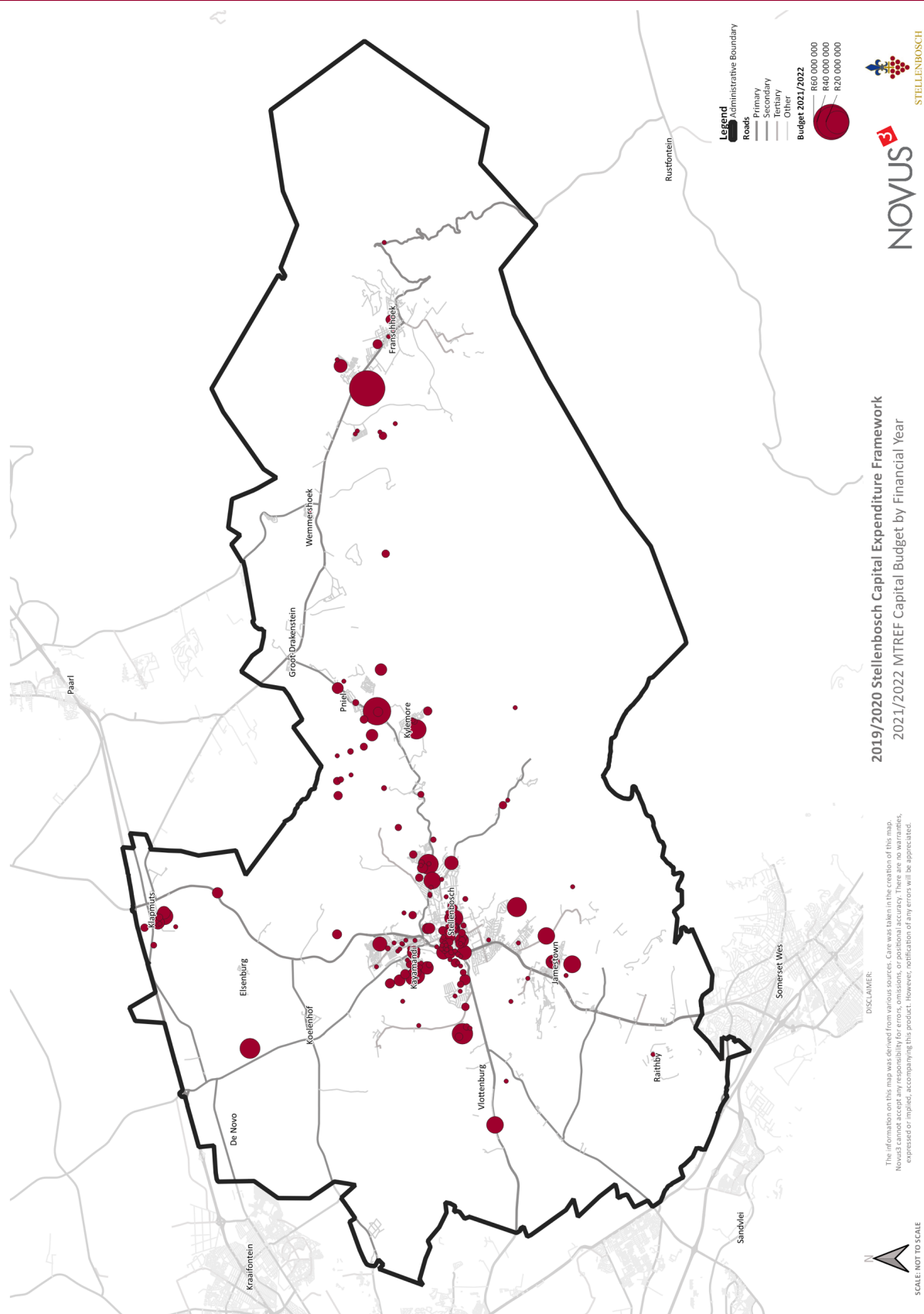
11.2.1 2019/2020 MTREF Capital Budget by Financial year



Map 27: 2019/2020 MTREF Capital Budget by Financial year – 2019/2020



Map 28: 2019/2020 MTREF Capital Budget by Financial year – 2020/2021



Map 29: 2019/2020 MTREF Capital Budget by Financial year – 2021/2022

11.2.2 2019/2020 MTREF Capital Budget by Unit

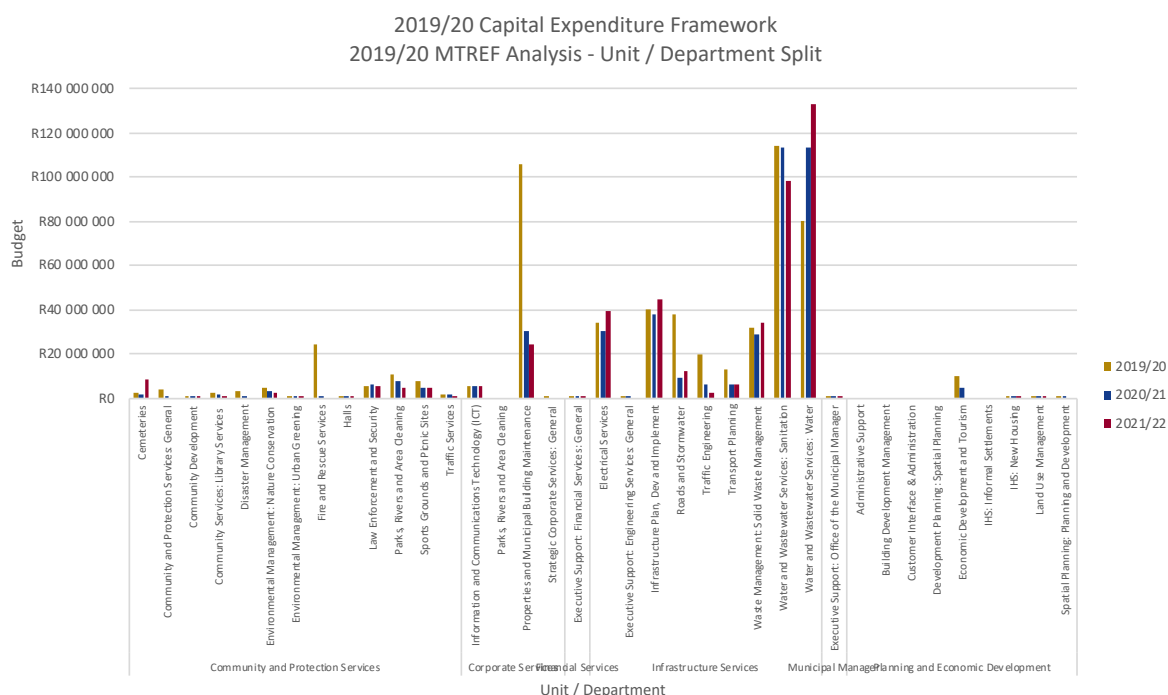


Figure 105: 2019/2020 MTREF Capital budget per directorate

Unit	2019/20	2020/21	2021/22	Total MTREF	%
Community and Protection Services	R64 315 000	R28 245 000	R27 675 000	R120 235 000	9%
Corporate Services	R111 970 000	R35 050 000	R29 050 000	R176 070 000	13%
Financial Services	R150 000	R150 000	R150 000	R450 000	0%
Infrastructure Services	R371 856 528	R346 125 959	R369 238 900	R1 087 221 387	78%
Municipal Manager	R35 000	R40 000	R40 000	R115 000	0%
Planning and Economic Development	R9 950 000	R5 001 800	R183 800	R15 135 600	1%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Almost 80% of the capital expenditure in the MTREF are allocated to Infrastructure services – with specific focus on Water services and Sanitation. Planning and Economic Development only enjoy 1% of the MTREF capital budget.

11.2.3 2019/2020 MTREF Capital Budget by mSCOA Expenditure and class

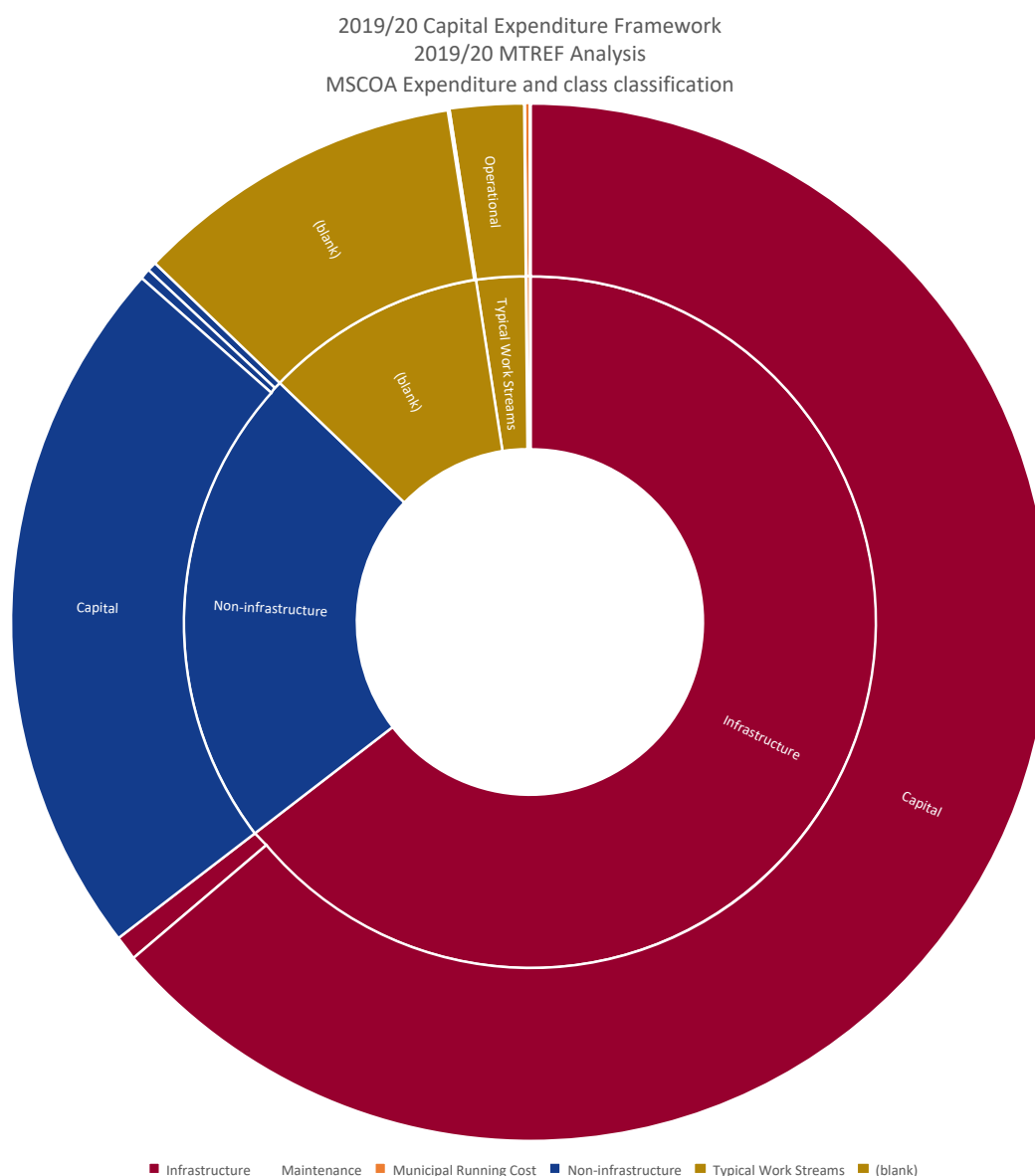


Figure 106: mSCOA Expenditure and class segment

This mSCOA segment aims to distinguish project based on existing or new assets. From the Figure 106, it is clear that the majority of capital expenditure across the analysis period relates to Infrastructure assets, of which the majority is reported as capital expenditure. “(blank)” refer to capital related to projects that are either not classified, or projects that exhausted their options of selections in another mSCOA segment – alternatively explained as “not applicable”.

Table 86: mSCOA Expenditure and class segment

Action Segment	2019/20	2020/21	2021/22	Total	%
Capital	R491 661 528	R368 027 759	R341 036 800	R1 200 726 087	86%
Infrastructure	R315 931 528	R309 935 959	R266 950 000	R892 817 487	64%
Non-infrastructure	R175 430 000	R57 791 800	R73 786 800	R307 008 600	22%
(blank)	R300 000	R300 000	R300 000	R900 000	0%
Operational	R17 710 000	R10 900 000	R10 800 000	R39 410 000	3%
Maintenance	R-	R-	R-	R-	0%
Municipal Running Cost	R500 000	R750 000	R1 000 000	R2 250 000	0%
Non-infrastructure	R1 500 000	R1 500 000	R1 500 000	R4 500 000	0%
Typical Work Streams	R15 710 000	R8 650 000	R8 300 000	R32 660 000	2%

Action Segment	2019/20	2020/21	2021/22	Total	%
(blank)	R-	R-	R-	R-	0%
(blank)	R48 905 000	R35 685 000	R74 500 900	R159 090 900	11%
Infrastructure	R2 250 000	R3 265 000	R5 280 900	R10 795 900	1%
Non-infrastructure	R2 500 000	R1 000 000	R1 000 000	R4 500 000	0%
(blank)	R44 155 000	R31 420 000	R68 220 000	R143 795 000	10%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

11.2.4 2019/2020 MTREF Capital Budget by mSCOA Type Segment

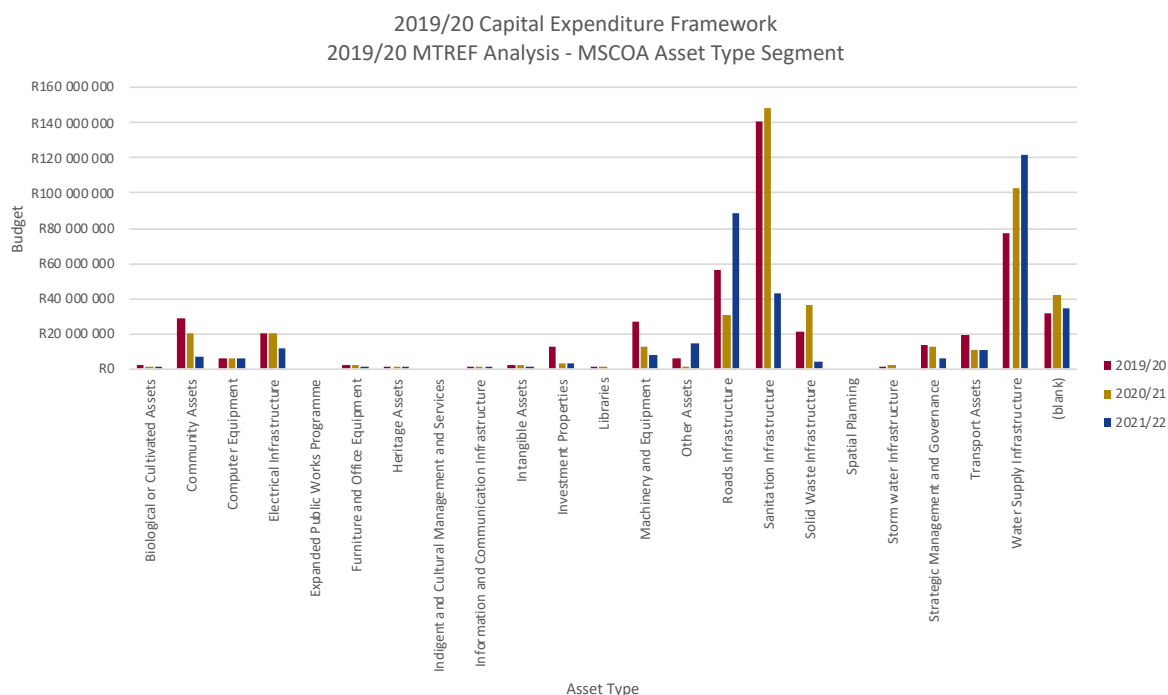


Figure 107: mSCOA Type Classification

The mSCOA type segment classify projects in terms of the scope of projects and according to which typical programme it relates. Sanitation infrastructure, and Water supply infrastructure are the main benefactors of capital expenditure during the reporting period.

Table 87: MSCOA -Type Classification

Asset Type	2019/20	2020/21	2021/22	Total	%
Biological or Cultivated Assets	R2 000 000	R1 000 000	R250 000	R3 250 000	0%
Community Assets	R28 675 000	R20 735 000	R7 335 000	R56 745 000	4%
Computer Equipment	R5 900 000	R5 800 000	R5 900 000	R17 600 000	1%
Electrical Infrastructure	R20 230 000	R20 750 000	R12 200 000	R53 180 000	4%
EPWP	R-	R-	R-	R-	0%
Furniture Office Equipment	R1 999 000	R1 800 000	R488 000	R4 287 000	0%
Heritage Assets	R200 000	R200 000	R200 000	R600 000	0%
Indigent Services	R-	R-	R-	R-	0%
ICT	R1 000 000	R1 000 000	R500 000	R2 500 000	0%
Intangible Assets	R1 900 000	R2 000 000	R1 510 000	R5 410 000	0%
Investment Properties	R12 500 000	R3 500 000	R3 500 000	R19 500 000	2%
Libraries	R550 000	R460 000	R-	R1 010 000	0%
Machinery and Equipment	R26 850 000	R13 150 000	R7 790 000	R47 790 000	4%
Other Assets	R5 960 000	R980 000	R14 300 000	R21 240 000	2%
Roads Infrastructure	R56 200 000	R30 300 000	R89 000 000	R175 500 000	14%
Sanitation Infrastructure	R140 400 000	R147 900 000	R42 750 000	R331 050 000	26%
Solid Waste Infrastructure	R21 150 000	R36 100 000	R4 500 000	R61 750 000	5%
Spatial Planning	R-	R-	R-	R-	0%
Storm water Infrastructure	R1 000 000	R2 000 000	R-	R3 000 000	0%
Strategic Governance	R13 650 000	R12 250 000	R6 000 000	R31 900 000	2%

Asset Type	2019/20	2020/21	2021/22	Total	%
Transport Assets	R19 020 000	R11 250 000	R10 350 000	R40 620 000	3%
Water Supply Infrastructure	R76 901 528	R103 051 528	R122 100 000	R302 053 056	23%
(blank)	R31 907 500	R41 920 000	R34 325 000	R108 152 500	8%
Grand Total	R467 993 028	R456 146 528	R362 998 000	R1 287 137 556	100%

11.2.5 2019/2020 MTREF Capital budget focused on functional areas

Figure 108: 2019/2020 MTREF capital budget focused on functional areas

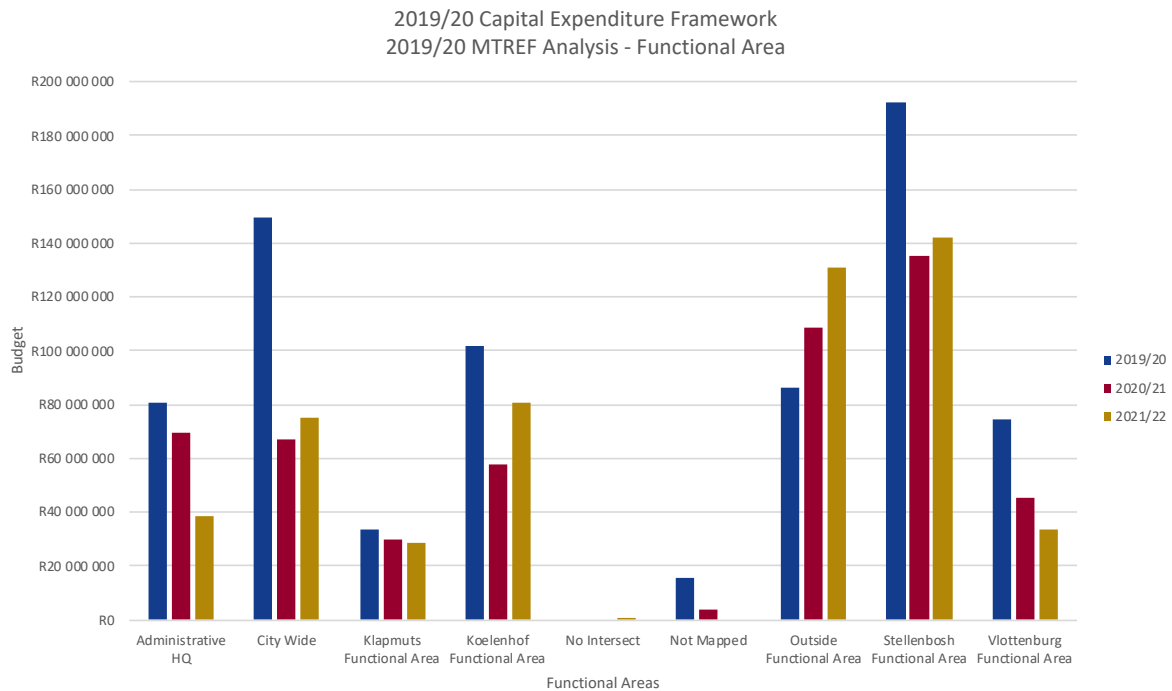
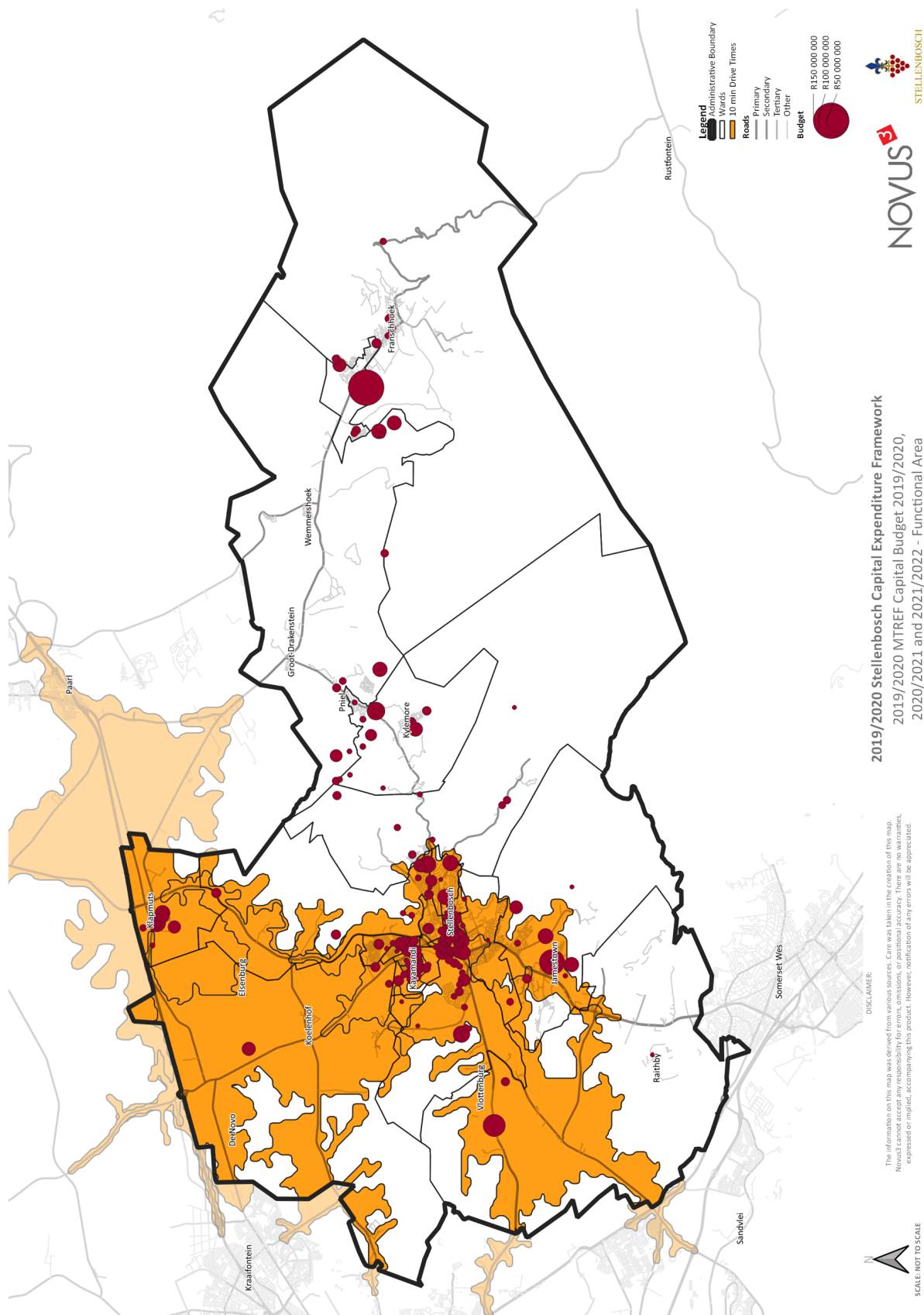


Table 88: 2019/2020 MTREF capital budget focused on functional areas

Functional Area	2019/20	2020/21	2021/22	Total	Percentage
Administrative HQ	R 80 665 000	R 69 686 800	R 38 476 800	R 188 828 600	11%
City Wide	R 149 405 000	R 67 110 000	R 75 000 900	R 291 515 900	16%
Klapmuts Functional Area	R 33 551 528	R 29 576 394	R 28 625 023	R 91 752 945	5%
Koelenhof Functional Area	R 102 100 857	R 57 644 772	R 80 406 846	R 240 152 475	13%
No Intersect	R 0	R 0	R 17 720	R 17 720	0%
Not Mapped	R 15 845 000	R 3 750 000	R -	R 19 595 000	1%
Outside Functional Area	R 86 173 196	R 108 376 129	R 130 824 054	R 325 373 378	18%
Stellenbosh Functional Area	R 192 161 502	R 135 588 586	R 142 050 325	R 469 800 412	26%
Vlottenburg Functional Area	R 74 705 024	R 45 298 263	R 33 290 173	R 153 293 460	9%
Grand Total	R 734 607 107	R 517 030 942	R 528 691 841	R 1 780 329 890	100%



Map 30: 2019/2020 MTREF capital budget focused on functional areas

11.2.6 2019/2020 MTREF Capital budget by priority development area

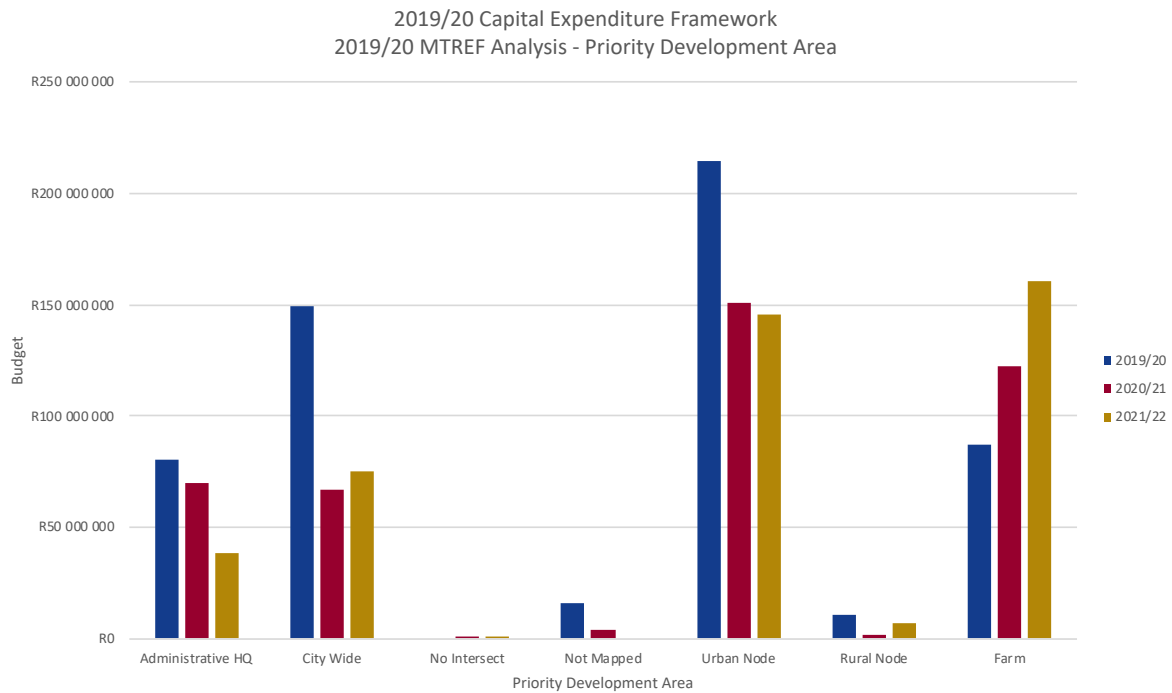
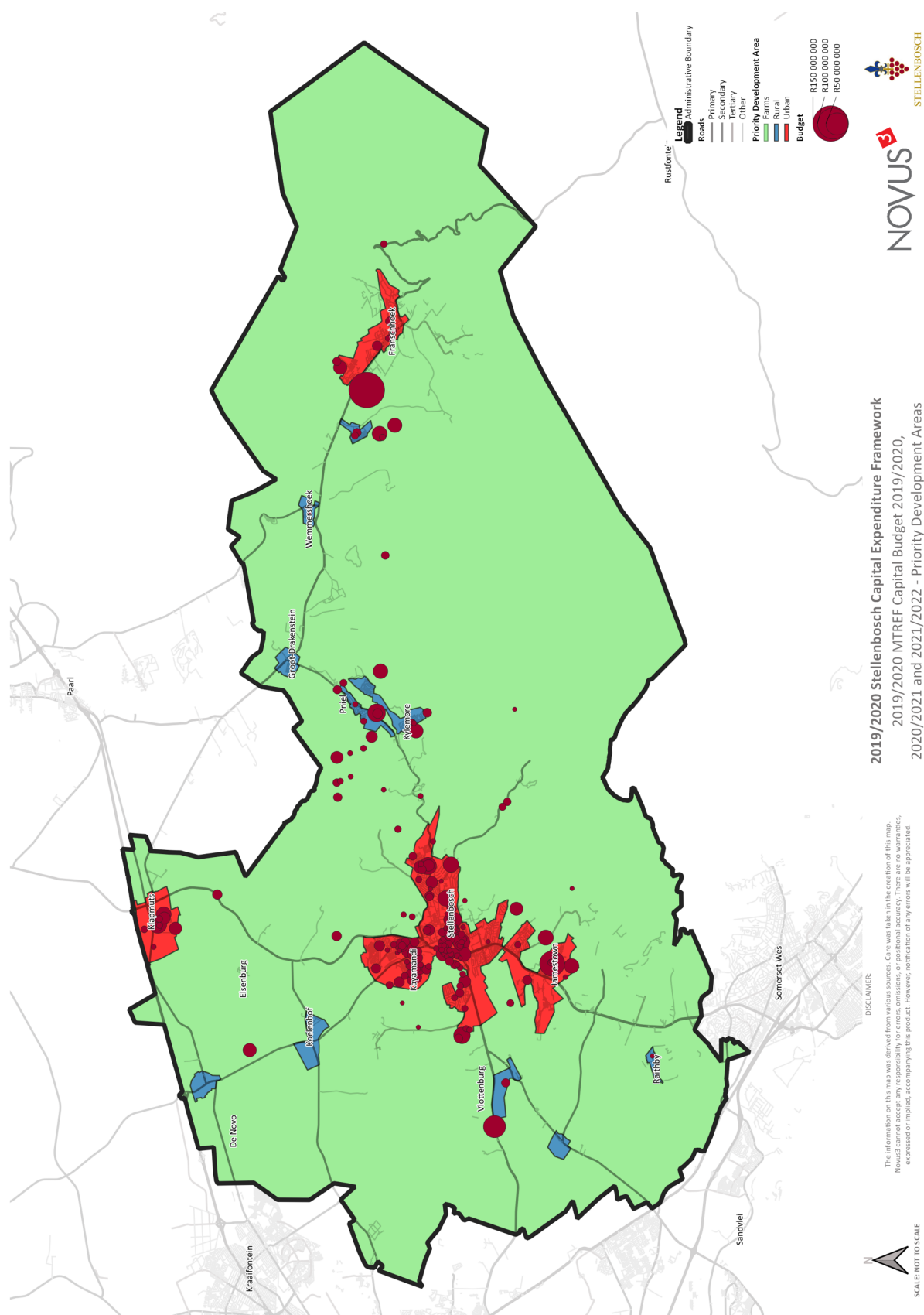


Figure 109: 2019/2020 MTREF capital budget focused on priority development areas

Table 89: 2019/2020 MTREF capital budget focused on priority development areas

PDA		2019/20		2020/21		2021/22		Total	%
Administrative HQ	R	80 665 000	R	69 686 800	R	38 476 800	R	188 828 600	13%
City Wide	R	149 405 000	R	67 110 000	R	75 000 900	R	291 515 900	21%
No Intersect	R	0	R	32 353	R	364 507	R	396 859	0%
Not Mapped	R	15 845 000	R	3 750 000	R	-	R	19 595 000	1%
Urban Node	R	214 729 271	R	150 723 709	R	145 569 206	R	511 022 186	37%
Rural Node	R	10 758 294	R	1 377 683	R	6 614 832	R	18 750 808	1%
Farm	R	86 873 964	R	121 932 215	R	160 311 455	R	369 117 634	26%
Grand Total	R	558 276 528	R	414 612 759	R	426 337 700	R	1 399 226 988	100%



Map 31: 2019/2020 MTREF capital budget focused on priority development areas

11.2.7 2019/2020 MTREF Capital budget by electoral ward

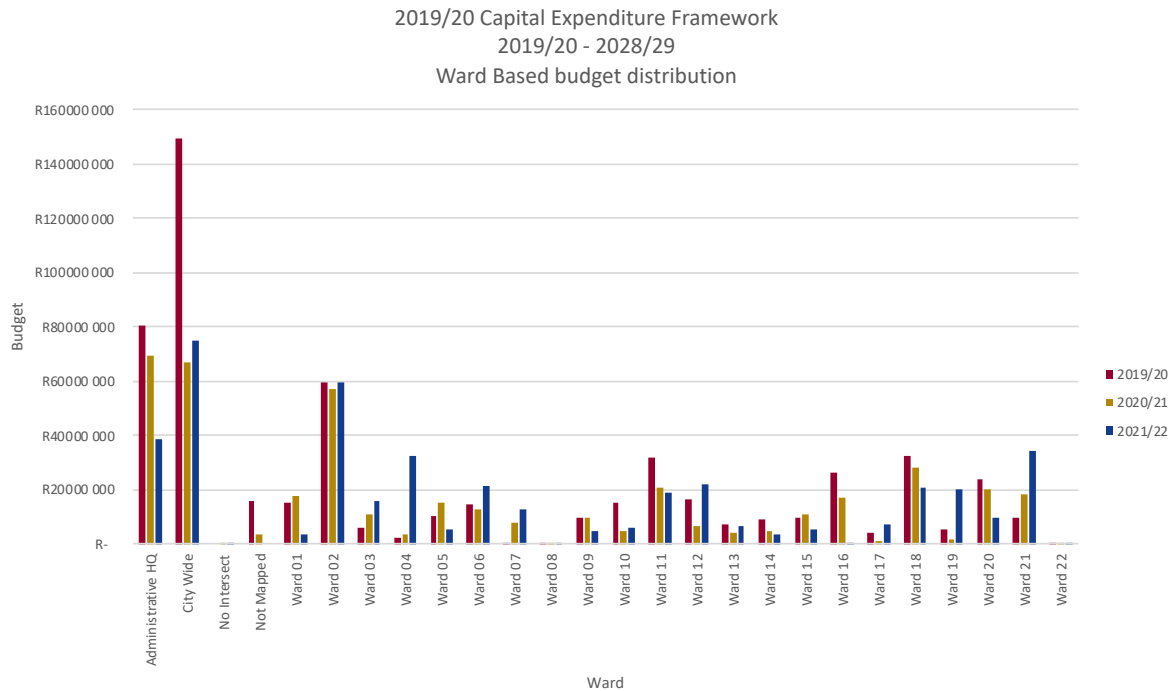
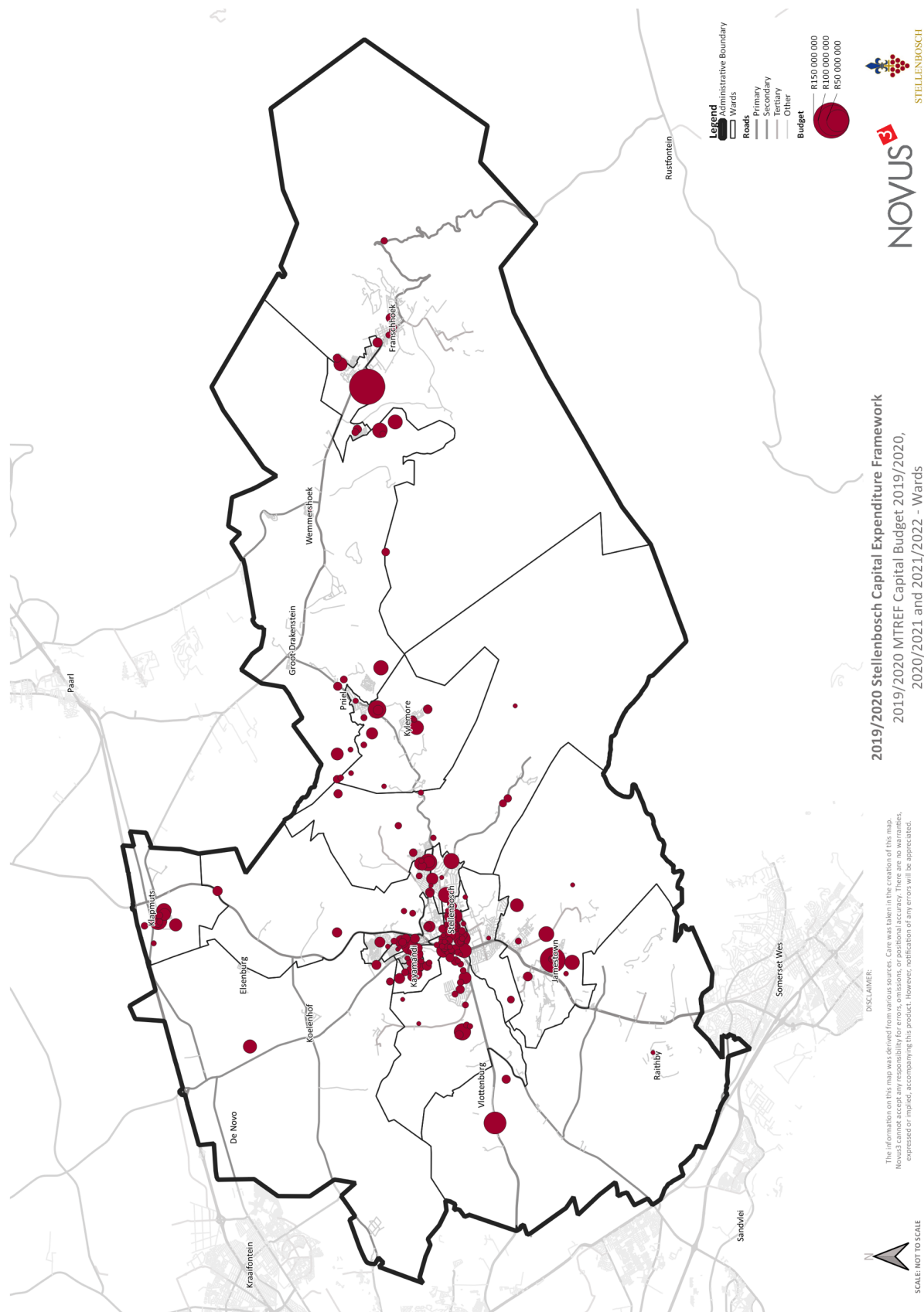


Figure 110: 2019/2020 MTREF capital budget focused on electoral wards

Table 90: 2019/2020 MTREF capital budget focused on priority electoral wards

Row Labels	2019/20	2020/21	2021/22	Total	Percentage
Administrative HQ	R 80 665 000	R 69 686 800	R 38 476 800	R 188 828 600	13%
City Wide	R 149 405 000	R 67 110 000	R 75 000 900	R 291 515 900	21%
No Intersect	R 0	R 32 310	R 364 074	R 396 384	0%
Not Mapped	R 15 845 000	R 3 750 000	R -	R 19 595 000	1%
Ward 01	R 15 136 801	R 17 576 699	R 3 508 902	R 36 222 402	3%
Ward 02	R 59 710 778	R 56 916 906	R 59 538 239	R 176 165 923	13%
Ward 03	R 6 146 664	R 10 996 489	R 15 906 388	R 33 049 541	2%
Ward 04	R 2 329 112	R 3 535 919	R 32 769 843	R 38 634 874	3%
Ward 05	R 10 600 613	R 14 976 065	R 5 496 259	R 31 072 937	2%
Ward 06	R 14 532 984	R 12 952 749	R 21 266 458	R 48 752 192	3%
Ward 07	R 645 336	R 7 835 094	R 12 987 865	R 21 468 295	2%
Ward 08	R 210 965	R 340 247	R 108 176	R 659 388	0%
Ward 09	R 9 847 247	R 9 433 020	R 4 993 556	R 24 273 823	2%
Ward 10	R 15 491 993	R 4 666 230	R 6 003 097	R 26 161 321	2%
Ward 11	R 32 164 357	R 20 836 472	R 18 671 648	R 71 672 477	5%
Ward 12	R 16 751 492	R 6 422 099	R 21 957 566	R 45 131 157	3%
Ward 13	R 7 291 502	R 4 400 145	R 6 691 078	R 18 382 725	1%
Ward 14	R 9 083 810	R 4 711 258	R 3 849 614	R 17 644 682	1%
Ward 15	R 9 575 877	R 11 193 248	R 5 236 570	R 26 005 695	2%
Ward 16	R 26 188 612	R 16 988 613	R 476 265	R 43 653 489	3%
Ward 17	R 4 061 006	R 1 131 619	R 7 082 802	R 12 275 427	1%
Ward 18	R 32 183 041	R 28 034 256	R 21 083 714	R 81 301 010	6%
Ward 19	R 5 646 109	R 1 856 204	R 19 945 727	R 27 448 040	2%
Ward 20	R 24 000 730	R 20 009 713	R 10 012 780	R 54 023 224	4%
Ward 21	R 10 018 149	R 18 472 940	R 34 505 187	R 62 996 276	5%
Ward 22	R 744 695	R 748 516	R 408 591	R 1 901 801	0%
Grand Total	R 558 276 875	R 414 613 608	R 426 342 099	R 1 399 232 582	100%



Map 32: 2019/2020 MTREF capital budget focused on priority electoral wards

11.3 2019/2020 – 2021/2022 MTREF Project List

Table 91: 2019/2020 – 2021/2022 MTREF Project list

MTREF Project List	2019/20	2020/21	2021/22
Community and Protection Services	R 64 315 000	R 28 245 000	R 27 675 000
Cemeteries	R 2 200 000	R 1 500 000	R 8 000 000
Extension of Cemetery Infrastructure	R 1 500 000	R 1 500 000	R 3 000 000
New Cemetery: Klappmuts	R 500 000	R -	R 5 000 000
Purchase of Equipment	R 200 000	R -	R -
Community and Protection Services: General	R 3 525 000	R 250 000	R -
Enlarge Office Space (Jan Marais Reserve)	R 1 500 000	R 250 000	R -
Implementation of Ward Priorities	R 2 025 000	R -	R -
Community Development	R 385 000	R 85 000	R 100 000
Furniture Tools and Equipment	R 85 000	R 85 000	R 100 000
SRD Vehicle	R 300 000	R -	R -
Community Services: Library Services	R 1 960 000	R 1 340 000	R 555 000
Cloetesville: Furniture, Tools and Equipment	R 45 000	R 50 000	R -
Franschhoek: Furniture Tools and Equipment	R 65 000	R 65 000	R -
Groendal Library: Furniture Tools and Equipment	R 65 000	R 75 000	R -
Idas Valley: Furniture, Tools and Equipment	R 55 000	R 55 000	R -
Kayamandi: Furniture, Tools and Equipment	R 45 000	R -	R -
Libraries: CCTV	R 400 000	R 300 000	R -
Libraries: Small Capital	R 75 000	R 85 000	R -
Library Books	R 150 000	R 160 000	R 170 000
Plein Street: Furniture, Tools and Equipment	R 60 000	R -	R -
Pniel: Furniture, Tools and Equipment	R -	R -	R 35 000
Replacement of geysers	R -	R -	R 100 000
Upgrading: Cloetesville Library	R 1 000 000	R -	R -
Upgrading: Kayamandi Library	R -	R 250 000	R -
Vehicles	R -	R 300 000	R 250 000
Disaster Management	R 2 900 000	R 800 000	R -
Double cab vehicle	R 400 000	R -	R -
Rescue Vehicle	R 2 500 000	R 800 000	R -
Environmental Management: Nature Conservation	R 4 360 000	R 3 120 000	R 2 420 000
4x4 bakkie	R -	R -	R 400 000
Air and Noise Control: FTE	R 10 000	R 20 000	R 20 000
Mont Rochelle Nature Reserve: Upgrade of Facilities.	R 1 500 000	R -	R -
Nature Conservation: Fleet (Truck)	R -	R -	R 1 100 000
Papegaaiberg Nature Reserve	R 2 000 000	R 1 000 000	R -
Upgrading of Jonkershoek Office Complex and Hatchery	R 750 000	R 2 000 000	R -
Workshop : FTE	R 100 000	R 100 000	R 100 000
Workshop: Community Services Tractors	R -	R -	R 800 000
Environmental Management: Urban Greening	R 185 000	R 150 000	R 700 000
Irrigation Systems	R -	R -	R 100 000
Storage Containers: Fertilisers & Pesticides.	R 35 000	R -	R -
Urban Forestry: Bakkie	R -	R -	R 350 000
Urban Forestry: Purchasing of bakkie 1 ton with canopy	R -	R -	R -
Urban Greening: Beautification: Main Routes and Tourist Routes	R 150 000	R 150 000	R 250 000
Fire and Rescue Services	R 23 900 000	R 800 000	R -
Furniture, tools & equipment	R 100 000	R -	R -
Hydraulic platform	R 12 000 000	R -	R -
Major Fire Pumper	R 4 500 000	R -	R -
Rescue equipment	R 300 000	R 300 000	R -
Upgrading of Stellenbosch Fire Station	R 5 000 000	R -	R -
Upgrading of swimmingpool	R 2 000 000	R 500 000	R -
Halls	R 250 000	R 250 000	R 700 000
Furniture Tools & Equipment	R 250 000	R 250 000	R 200 000
Upgrading of Halls	R -	R -	R 250 000
Vehicle Fleet	R -	R -	R 250 000

MTREF Project List		2019/20	2020/21	2021/22
Law Enforcement and Security	R	5 150 000	R 5 850 000	R 5 350 000
Furniture Tools and Equipment	R	350 000	R 300 000	R 300 000
Install and Upgrade CCTV/ LPR Cameras In WC024	R	1 000 000	R 1 500 000	R 1 500 000
Install Computerized Access Security Systems and CCTV Cameras At Municipal Buildings	R	1 000 000	R 950 000	R 950 000
Law Enforcement Tools and Equipment	R	600 000	R 350 000	R 350 000
Law Enforcement: Vehicle Fleet	R	2 000 000	R 2 500 000	R 1 000 000
Pound Upgrade	R	-	R -	R 1 000 000
Security Upgrades	R	200 000	R 250 000	R 250 000
Parks, Rivers and Area Cleaning	R	10 550 000	R 7 700 000	R 4 700 000
Artificial grass on parks and gardens	R	-	R -	R 300 000
Fencing on Various Parks and Gardens	R	-	R -	R 200 000
Furniture, Tools and Equipment	R	50 000	R 50 000	R 50 000
Landscaping of Circles in Stellenbosch	R	-	R -	R 150 000
Pathways on Parks & gardens	R	50 000	R -	R 100 000
Purchase of Specialised Equipment	R	100 000	R -	R -
Purchase of Specialised Vehicles	R	2 000 000	R 1 000 000	R 1 000 000
River development	R	-	R -	R 250 000
SMART Parks Development	R	5 000 000	R -	R -
Spray/Water Parks	R	1 000 000	R 5 000 000	R 1 000 000
Upgrading of Parks	R	2 350 000	R 1 650 000	R 1 650 000
Sports Grounds and Picnic Sites	R	7 530 000	R 4 800 000	R 4 750 000
Borehole: Rural Sportsgrounds	R	550 000	R 550 000	R 550 000
Fencing: Sport Grounds (WC024)	R	1 000 000	R 1 000 000	R 1 000 000
Furniture, Tools and Equipment	R	100 000	R -	R -
Recreational Equipment Sport	R	80 000	R -	R -
Sight Screens/Pitch Covers Sports Grounds	R	200 000	R -	R -
Sport: Community Services Special Equipment	R	200 000	R -	R -
Upgrade of Irrigation System	R	-	R -	R 200 000
Upgrade of Sport Facilities	R	4 000 000	R 3 000 000	R 3 000 000
Upgrading of Lanquedoc Sports Grounds	R	600 000	R -	R -
Upgrading of Tennis Courts: Idas Valley & Cloetesville	R	550 000	R -	R -
Vehicle Fleet	R	250 000	R 250 000	R -
Traffic Services	R	1 420 000	R 1 600 000	R 400 000
Furniture, Tools & Equipment	R	300 000	R 200 000	R 200 000
Mobile Radios	R	200 000	R 200 000	R 200 000
Replacement of Patrol Vehicles	R	920 000	R 1 200 000	R -
Corporate Services	R	111 970 000	R 35 050 000	R 29 050 000
Information and Communications Technology (ICT)	R	5 600 000	R 5 100 000	R 5 200 000
Public WI-FI Network	R	600 000	R 600 000	R 600 000
Purchase and Replacement of Computer/software and Peripheral devices	R	500 000	R 500 000	R 600 000
Upgrade and Expansion of IT Infrastructure Platforms	R	4 500 000	R 4 000 000	R 4 000 000
Properties and Municipal Building Maintenance	R	106 050 000	R 29 950 000	R 23 850 000
Flats: Cloetesville Fencing	R	-	R -	R 100 000
Flats: Interior Upgrading: Cloetesville	R	3 000 000	R 1 500 000	R -
Furniture Tools and Equipment: Property Management	R	250 000	R 250 000	R 250 000
Kaymandi: Upgrading of Makapula Hall	R	200 000	R 1 000 000	R 1 000 000
La Motte Clubhouse	R	3 700 000	R 300 000	R -
New Community Hall Klappmuts	R	1 000 000	R -	R -
Purchasing of land	R	77 500 000	R -	R -
Rebuild: Kleine Libertas Theatre	R	4 000 000	R 5 000 000	R 3 000 000
Structural Improvement: Beltana	R	-	R 500 000	R 10 000 000
Structural Improvement: General	R	1 000 000	R 1 000 000	R 1 500 000
Structural improvements at the Van der Stel Sport grounds	R	200 000	R 1 000 000	R 1 000 000
Structural Upgrade: Heritage Building	R	500 000	R 500 000	R 200 000
Structural Upgrades General: The Steps	R	7 000 000	R 7 500 000	R -
Structural Upgrading: Community Hall Lamotte	R	1 700 000	R 300 000	R -
Upgrade Millenium Hall Pniel	R	-	R 300 000	R 3 500 000
Upgrading Fencing	R	300 000	R 300 000	R 300 000
Upgrading of Community Facilities: Jonkershoek	R	200 000	R 1 000 000	R 1 000 000

MTREF Project List		2019/20	2020/21	2021/22
Upgrading of Eike Town Town Hall	R	1 000 000	R 2 000 000	R -
Upgrading of Public Toilet Facilities in Franschhoek	R	500 000	R 500 000	R -
Upgrading of Stellenbosch Town Hall	R	2 000 000	R 1 000 000	R -
Upgrading of Traffic Offices: Stellenbosch	R	2 000 000	R 6 000 000	R 2 000 000
Strategic Corporate Services: General	R	320 000	R -	R -
Implementation of Ward Priorities	R	320 000	R -	R -
Financial Services	R	150 000	R 150 000	R 150 000
Executive Support: Financial Services: General	R	150 000	R 150 000	R 150 000
Furniture, Tools & Equipment	R	150 000	R 150 000	R 150 000
Infrastructure Services	R	371 856 875	R 346 126 808	R 369 243 299
Electrical Services	R	34 290 346	R 30 500 848	R 38 954 398
Ad-Hoc Provision of Streetlighting	R	1 000 000	R 1 000 000	R 1 000 000
Automatic Meter Reader	R	400 000	R 400 000	R 400 000
Buildings & Facilities Electrical Supply - Stellenbosch	R	500 000	R 500 000	R 100 000
DSM Geyser Control	R	500 000	R 100 000	R 100 000
Electrification INEP	R	11 160 000	R 4 000 000	R 4 000 000
Energy Balancing Between Metering and Mini-Substations	R	500 000	R 500 000	R 500 000
Energy Efficiency and Demand Side Management	R	2 000 000	R 2 000 000	R -
General System Improvements - Franschhoek	R	2 000 000	R 2 000 000	R 2 000 000
General Systems Improvements - Stellenbosch	R	3 000 000	R 3 000 000	R 3 000 000
Infrastructure Improvement - Franschhoek	R	1 500 000	R 1 500 000	R 2 000 000
Integrated National Electrification Programme (Enkanini)	R	4 480 000	R 6 400 000	R -
Kwarentyn Sub cables: 11kV 3 core 185mmsq PILC(Table19) copper cabling, 3.8km	R	-	R -	R 5 500 000
Lighting on Public Places	R	1 000 000	R 1 000 000	R 1 000 000
Meter Panels	R	400 000	R 500 000	R 500 000
Network Cable Replace 11 Kv	R	3 000 000	R 3 000 000	R 3 000 000
New 66kV substation - Dwars Rivier	R	1 100 346	R 2 700 848	R 14 004 398
Replace Ineffective Meters & Energy Balance of mini-substations	R	500 000	R 600 000	R -
Small Capital: Fte Electrical Engineering Services	R	250 000	R 300 000	R 350 000
System Control Centre & Upgrade Telemetry	R	1 000 000	R 1 000 000	R 500 000
Vehicle Fleet	R	-	R -	R 1 000 000
Executive Support: Engineering Services: General	R	800 000	R 400 000	R -
Furniture, Tools & Equipment	R	110 000	R 100 000	R -
Update of Engineering Infrastructure GIS Data	R	690 000	R 300 000	R -
Infrastructure Plan, Dev and Implement	R	40 431 528	R 37 796 528	R 44 393 900
Access to Basic Services (ABS) - All Wards	R	250 000	R 265 000	R 280 900
Basic Improvements: Langrug	R	4 300 000	R 5 500 000	R 5 500 000
Cloeteville IRDP	R	260 000	R 280 000	R 6 790 000
Computer - Hardware/Equipment: Human Settlements & Property	R	50 000	R 50 000	R 50 000
Droe Dyke	R	-	R -	R -
Enkanini ABS	R	250 000	R 250 000	R 250 000
Enkanini Planning and Implementation (Roads and Basic Services)	R	-	R -	R 5 000 000
Furniture,Tools and Equipment: Human Settlements and Property	R	20 000	R 20 000	R 23 000
Housing Projects: Capital Spares	R	500 000	R 500 000	R 500 000
Idas Valley mixed housing project IRDP / FLISP	R	8 500 000	R 5 000 000	R -
Jamestown: Housing	R	600 000	R 7 980 000	R 10 500 000
Kayamandi Town Centre - Civil Infrastructure	R	2 000 000	R 3 000 000	R 5 000 000
Kayamandi Town Centre - top structures	R	-	R -	R -
Kayamandi: Watergang and Zone O	R	3 650 000	R 5 000 000	R 4 000 000
Klapmuts: Erf 2181 (298 serviced sites)	R	6 451 528	R 6 451 528	R -
La Motte Old Forest Station (322 BNG & 106 GAP Units) IRDP	R	-	R -	R -
La Rochelle - Services	R	-	R -	R -
Langrug Dam	R	3 500 000	R -	R -
Longlands Vlotenburg: Housing Internal Services	R	4 000 000	R -	R -

MTREF Project List		2019/20	2020/21	2021/22
Mountainview - Installation of water and sewer services - Jamestown	R	100 000	R -	R -
Nietvoorbij	R	-	R -	R -
Northern Extension: Feasibility	R	500 000	R 3 500 000	R 3 500 000
Smartie Town, Cloetesville	R	5 500 000	R -	R -
Town Centre Stellenbosch (Social Housing)	R	-	R -	R 3 000 000
Roads and Stormwater	R	37 800 000	R 9 300 000	R 12 050 000
Adhoc Reconstruction Of Roads (WC024)	R	4 000 000	R 6 000 000	R 6 000 000
Eastern Link Road: Wilderbosch - Trumali Link	R	2 000 000	R -	R -
Furniture, Tools and Equipment : Tr&Stw	R	300 000	R 300 000	R 300 000
Lanquedoc Access road and Bridge	R	2 000 000	R -	R -
R44/Alexander/Polkadraai Interchange	R	5 000 000	R -	R -
Reseal Roads - Idasvalley & Surrounding	R	1 000 000	R -	R 2 750 000
Reseal Roads - Kayamandi & Surrounding	R	1 000 000	R -	R 3 000 000
Reseal Roads - Kylemore & Surrounding	R	1 000 000	R -	R -
Reseal Roads - Onderpapegaai & Surrounding	R	1 000 000	R -	R -
Reseal Roads - Paradyskloof & Surrounding	R	1 000 000	R -	R -
Reseal Roads - Stellenbosch CBD	R	1 000 000	R 1 000 000	R -
Reseal Roads- Franschhoek CBD	R	1 000 000	R -	R -
Specialized Vehicles	R	3 000 000	R -	R -
Structural Rehabilitation - Bridges	R	5 000 000	R -	R -
Update Pavement Management System	R	-	R -	R -
Upgrade Gravel Roads - Devon Valley	R	1 500 000	R -	R -
Upgrade Gravel Roads - Johannesburg, Pniel, Kylemore	R	-	R -	R -
Upgrade Roads - Techno Park Access Road	R	5 000 000	R -	R -
Upgrade Stormwater Water Conveyance System	R	1 000 000	R 2 000 000	R -
Western Link Road: Technopark - Adam Tas	R	2 000 000	R -	R -
Traffic Engineering	R	19 800 000	R 6 250 000	R 2 400 000
Accident Information System	R	750 000	R 250 000	R 250 000
Asset Management: Traffic Signaling Systems	R	-	R -	R 700 000
Directional Information Signage	R	200 000	R 200 000	R -
Furniture, Tools and Equipment : Traffic Engineering	R	100 000	R 100 000	R -
Jamestown South Transport Network	R	1 000 000	R 2 000 000	R -
Main Road Intersection Improvements: Franschhoek	R	1 700 000	R -	R -
Main Road Intersection Improvements: R44 / Merriman Street	R	12 000 000	R -	R -
Main Road Intersection Improvements:Pniel / Kylemore	R	-	R -	R 400 000
Pedestrian Crossing Implementation	R	1 000 000	R 100 000	R -
Road Transport Safety Master Plan - WC024	R	250 000	R 250 000	R -
Signalisation implementation	R	200 000	R 250 000	R -
Specialised Equipment: Roadmarking Machine + Trailer	R	-	R -	R 300 000
Specialized Vehicle	R	-	R -	R 500 000
Traffic Calming Projects: Implementation	R	1 500 000	R 2 000 000	R -
Traffic Management Improvement Programme	R	500 000	R 500 000	R -
Traffic Signal Control: Installation and Upgrading of	R	500 000	R 500 000	R -
Traffic Signals and Associated Components	R	-	R -	R -
Universal Access Implementation	R	100 000	R 100 000	R -
Vehicles	R	-	R -	R 250 000
Transport Planning	R	12 600 000	R 6 200 000	R 6 000 000
Bicycle Lockup Facilities	R	-	R -	R 200 000
Bus and Taxi Shelters	R	200 000	R 200 000	R 200 000
Comprehensive Integrated Transport Master Plan	R	900 000	R 1 000 000	R 600 000
Khayamandi Pedestrian Crossing (R304, River and Railway Line)	R	2 000 000	R 500 000	R -
Non-Motorised Transport Implementation	R	3 000 000	R 2 000 000	R 2 000 000
Northern Extension: Public Transport Network	R	-	R -	R 2 000 000
Stellenbosch NMT: Jamestown - new sidewalks	R	1 500 000	R -	R -
Taxi Rank - Kayamandi	R	1 500 000	R -	R -
Taxi Rank: Klipmuts	R	2 500 000	R 1 500 000	R -
Update Roads Master Plan for WC024	R	1 000 000	R 1 000 000	R 1 000 000
Waste Management: Solid Waste Management	R	31 735 000	R 28 945 000	R 34 345 000
Expansion of the landfill site (New cells)	R	2 000 000	R 8 000 000	R 16 000 000

MTREF Project List		2019/20	2020/21	2021/22
Furniture, Tools and Equipment : Solid Waste	R	35 000	R 45 000	R 45 000
Integrated Waste Management Plan	R	-	R -	R 100 000
Landfill Gas To Energy	R	-	R 500 000	R 500 000
Skips (5,5kl)	R	400 000	R 400 000	R 200 000
Stellenbosch WC024 (MRF) - Construct	R	22 000 000	R -	R -
Street Refuse Bins	R	300 000	R 2 000 000	R 2 000 000
Transfer Station: Stellenbosch Planning and Design	R	1 000 000	R 10 000 000	R 10 000 000
Upgrade Refuse disposal site (Existing Cell)- Rehab	R	1 500 000	R 2 000 000	R 1 000 000
Vehicles	R	3 000 000	R 3 000 000	R 3 000 000
Waste Biofuels	R	-	R -	R 300 000
Waste Management Software	R	-	R -	R 200 000
Waste Minimization Projects	R	1 000 000	R -	R -
Waste to Energy - Implementation	R	-	R 3 000 000	R 1 000 000
Waste to Energy - Planning	R	500 000	R -	R -
Water and Wastewater Services: Sanitation	R	114 400 000	R 113 234 431	R 98 350 000
100 New Development Bulk Sewer Supply WC024	R	2 000 000	R 2 000 000	R 2 000 000
110 Bulk Sewer Outfall: Jamestown	R	30 000 000	R 30 000 000	R 6 000 000
111 Sewerpipe Replacement: Dorp Straat	R	9 000 000	R 12 000 000	R 6 000 000
112 New Plankenburg Main Outfall Sewer	R	10 000 000	R -	R -
113 Sewer Pumpstation & Telemetry Upgrade	R	1 000 000	R 1 000 000	R 1 000 000
114 Sewerpipe Replacement	R	3 000 000	R 3 000 000	R 4 000 000
115 Idas Valley Merriman Outfall Sewer	R	10 000 000	R -	R -
120 Specialized vehicle: Jet Machine	R	1 000 000	R -	R -
131 Update Sewer Masterplan and IMQS	R	1 500 000	R 1 500 000	R 1 500 000
150 Upgrade of WWTW: Pniel & Decommissioning Of Franschhoek	R	40 000 000	R 44 684 431	R 50 000 000
151 Upgrade of WWTW: Klapmuts	R	100 000	R 500 000	R 1 000 000
152 Upgrade of WWTW Wemmershoek	R	5 000 000	R 15 000 000	R -
160 Furniture, Tools and Equipment : Sanitation	R	1 200 000	R 1 200 000	R 1 200 000
162 Upgrade Auto-Samplers	R	100 000	R 100 000	R 150 000
Bulk Sewer Upgrade: Dwarsriver Area (Kylemore, Boschendal, Pniel)	R	-	R -	R -
Cloetesville Bulk Sewer Upgrade	R	-	R -	R -
Dorp Street Bulk Sewer Upgrade	R	-	R -	R 500 000
Effluent Recycling of Waste Water 10Ml per day	R	-	R -	R 500 000
Franschhoek Sewer Network Upgrade	R	-	R -	R -
Industrial Effluent Monitoring	R	500 000	R 750 000	R 1 000 000
Kayamandi Bulk Sewer	R	-	R 500 000	R 10 000 000
Klapmuts Bulk Sewer Upgrade	R	-	R 1 000 000	R 10 000 000
Northern Extension: Phase 2 Sanitation Infrastructure	R	-	R -	R 2 000 000
Update Sewer Masterplan	R	-	R -	R 500 000
Vehicles	R	-	R -	R 1 000 000
Water and Wastewater Services: Water	R	80 000 000	R 113 500 000	R 132 750 000
101 Bulk water Supply Pipe Line & Pumpstations: Franschhoek	R	6 000 000	R 12 000 000	R -
102.5 Bulk water Supply Pipe : Cloetesville/ Idas Valley	R	-	R -	R 1 000 000
103 Bulk Water Supply Pipeline & Reservoir - Jamestown	R	1 000 000	R 10 000 000	R 10 000 000
104 Bulk water supply pipe and Reservoir: Kayamandi	R	15 000 000	R 7 500 000	R -
105 Bulk water supply Klapmuts	R	10 000 000	R 15 000 000	R 5 000 000
107 Bulk Water Supply Pipe: Idas Valley/Papegaaiberg and Network Upgrades	R	-	R -	R 1 000 000
108 Water Treatment Works: Idasvalley	R	2 000 000	R 11 000 000	R 15 000 000
109 Water Treatment Works: Paradyskloof and Associated works	R	-	R 500 000	R 14 000 000
116 Chlorination Installation: Upgrade	R	500 000	R 500 000	R 500 000
117 Water Conservation & Demand Management	R	10 000 000	R 5 000 000	R 5 000 000
118 Reservoirs and Dam Safety	R	1 500 000	R 1 500 000	R 1 500 000
119 New Developments Bulk Water Supply WC024	R	2 000 000	R 2 000 000	R 2 000 000
120 Waterpipe Replacement	R	5 000 000	R 6 000 000	R 7 000 000
121 Water Telemetry Upgrade	R	500 000	R 500 000	R 750 000
122 Furniture, Tools and Equipment : Reticulation	R	100 000	R 100 000	R 100 000

MTREF Project List		2019/20	2020/21	2021/22
123 Upgrade and Replace Water Meters	R	2 500 000	R 2 500 000	R 3 000 000
124 Vehicles	R	1 000 000	R 1 000 000	R 1 000 000
125 Update Water Masterplan and IMQS	R	1 500 000	R 1 500 000	R 1 500 000
Dwarsriver Bulk Supply Augmentation and Network Upgrades	R	-	R 1 000 000	R 30 000 000
Franschhoek Bulk Water Upgrades	R	-	R -	R -
New Reservoir & Pipeline: Vloottenburg	R	20 000 000	R 20 000 000	R 10 000 000
New Reservoir Rosendal	R	1 000 000	R 15 000 000	R 6 000 000
Northern Extension: Phase 2 Water Infrastructure	R	-	R -	R 2 000 000
Upgrade of Franschhoek Reservoirs and Pipelines	R	-	R -	R 1 000 000
Upgrading of Koelenhof Water Scheme	R	-	R 500 000	R 15 000 000
WSDP (tri-annually)	R	400 000	R 400 000	R 400 000
Municipal Manager	R	35 000	R 40 000	R 40 000
Executive Support: Office of the Municipal Manager	R	35 000	R 40 000	R 40 000
Furniture, Tools and Equipment	R	35 000	R 40 000	R 40 000
Planning and Economic Development	R	9 950 000	R 5 001 800	R 183 800
Economic Development and Tourism	R	9 695 000	R 4 785 000	R -
Establishment of Informal Trading Sites: George Blake Street	R	4 500 000	R -	R -
Furniture Tools and Equipment	R	45 000	R 35 000	R -
Local Economic Development Hub Kayamandi	R	5 000 000	R 4 500 000	R -
Upgrading of the Kayamandi Economic Tourism Corridor	R	150 000	R 250 000	R -
IHS: New Housing	R	50 000	R 51 800	R 58 800
Furniture, Tools and Equipment	R	50 000	R 51 800	R 58 800
Land Use Management	R	150 000	R 130 000	R 125 000
Furniture, Tools & Equipment	R	150 000	R 130 000	R 125 000
Spatial Planning: Planning and Development	R	55 000	R 35 000	R -
Furniture, Tools and Equipment	R	55 000	R 35 000	R -
Grand Total	R	558 276 875	R 414 613 608	R 426 342 099

Section 12 Institutional Arrangements



12 Institutional Arrangements

Stellenbosch Local Municipality is one of the municipalities who has developed a Capital Expenditure Framework, and one of the only municipalities. The ease with which the CEF could be developed is largely attributable to the levels of institutional maturity which allowed function in an integrated fashion as intended by the IUDF.

Regardless of the institutional maturity, the municipality still identified areas of improvement that can be worked on towards the next version of the Capital Expenditure Framework.

This section will deal with mainly three components:

- Firstly, it will discuss elements of possible improvements and additions towards the second generation Capital Expenditure Framework;
- Secondly, it will unpack the performance indicators that could potentially be introduced in the second generation Capital Expenditure Frameworks, and;
- Thirdly, it will show the alignment of the Capital Expenditure Framework in terms of National, Provincial, and Municipal strategic outcomes.

12.1 Towards the second generation Capital Expenditure Framework

12.1.1 Volume based data collection

This CEF is financially oriented. In order to ensure that the service delivery needs within the municipality are met, it is necessary to have a better understanding of the asset quality within the municipality and what the volumes are that will be obtained after spending the capital as expressed in the CEF. This will lead to a CEF that not only look at whether the municipal budget is sustainable, but also meet the potential needs that is facing the municipality as identified in the demand quantification chapter of this document.

12.1.2 Updated master plans

The CEF is reports on an ongoing cycle of project conceptualisation, planning budgeting and implementation. Part of this process is to update master plans – alternatively referred to as sector plans. This will then feed into the Integrated Infrastructure Investment Framework (IIIF). Stellenbosch is in process of updating various master plans which, once updated, will result in a project list which will then feed into the CEF, and so ensure that the CEF remains current and relevant.

12.1.3 Continuation of the Capital Planning Forum

The Capital Planning Forum (CPF), is a mechanism within the Stellenbosch municipality where the proverbial tyre hits the proverbial ground. It is the engine room that led to a collaborative effort in delivering the CEF.

The CPF is headed by the CFO and Director of Governance (Responsible for the IDP, Public Participation and Performance Management) calling together all departments with a vested interest in capital planning, budgeting and implementation.

The CPF is the platform where integrative planning and collaboration occurs, and where departments have the opportunity to raise concerns, questions and suggestions regarding amongst others the capital budget. As a result the CPF is a critical forum for integrated infrastructure planning and budgeting.

12.1.4 Incorporation of Provincial departments capital need lists

The IIIF is intended to not only show the IIIF of the municipality, but rather the total planned capital expenditure within the municipal jurisdiction, and beyond. A first step would be to start gathering the information, and incorporating it into the reporting component of the CEF and as an informant to integrated planning.

12.1.5 Clear set of performance indicators

During the process of developing the CEF, various indicators were provided and discussed. The first round CEF's should show which metrics could assist in measuring performance towards the IUDF. Two such indicators include the Poor versus Non-Poor capital expenditure ratio, as well as the % of capital expenditure that is spatially targeted.

12.1.6 Adjustment of submission dates

There is a call for better alignment between municipal and national planning processes in terms of submission dates of critical document such as the MTREF budget, SDF review, IDP update and a CEF. What makes this even more critical of a call, is the fact that the said documents are all intertwined, which calls for stronger coordination within the municipality.

12.2 Performance Indicators

12.2.1 Contextualisation

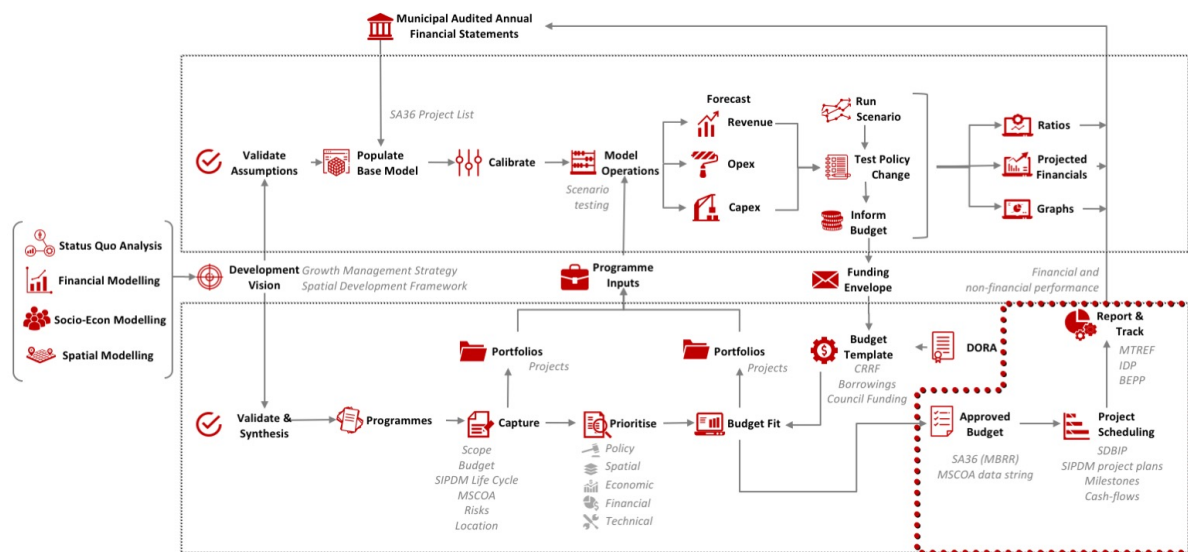


Figure 111: Reporting and Tracking

Reporting and tracking is one of the most important components of the total process. It enables a municipality, and other spheres of government to track the impact of capital investment. Performance indicators aims to assist in understanding the performance of a municipality in order to ensure that the municipality are strategically aligned with legislative, planning and budgeting requirements.

The CP3 system not only allows for project identification and implementation based on certain spatial targeted areas, but it continues to evaluate and track implementation. It provides a platform for reporting and evaluation and in doing so provides more credibility to the municipality's prioritisation process. Specific elements to which the said system can report include:

- Specific spatial impact of projects;
- Capital expenditure versus a multitude of spatial filters;
- Capital expenditure in terms of strategic direction of various tiers of government;
- CIDMS Phasing of projects; and
- Requested expenditure versus Planned expenditure versus Actual expenditure.

As this is the first reporting period of the IUDF programme, the maturity of the CEF process within different municipalities varies which means that the ability to respond to specific performance indicators varies. Based on the maturity and ability of the different municipalities, the performance indicators will evolve to enable uniform tracking of progress. Performance indicators are therefore used as a beta reporting attempt – pending further clarity on performance indicator requirements.

This section aims to shed a light on the performance indicators as required by the IUDF guidelines, with specific focus on a performance bonus available within the IUDF grant, and to show the expenditure of the City in terms of the various spheres of governments' outcomes.

12.2.2 Indicators for Performance based funding allocation

Each indicator will be discussed based on the following format:

- Target: outlines the factors (data) required in order to calculate each of the Indicators.
- Source data: outlines the datasets that have been collected for purposes of the calculation method as well as the corresponding source of each dataset.
- Data Integrity and comments: outlines a summarised data audit of the datasets collected as well as limitation factors that need to be taken into account during the calculation process.
- Assumptions: outlines assumptions made to conform to the criteria as set out by National Treasury. Calculating the Performance Indicator – outlines the methodology process used to calculate the indicator.
- Results: outlines the results from the methodology followed within the reporting format as set out by National Treasury.
- Proposed Methodology and Data Improvements: outlines solutions to the limitation factors described within the data audit process as well as factors that need to be taken into account for future calculation of the indicators.

For the indicators that could not be calculated a proposed methodology has been included for implementation once the outstanding/adequate datasets have been collected.

12.2.3 Indicator 1: Own funded capital expenditure

12.2.3.1 Target

The Ratio measures the extent to which the municipality's Total Capital Expenditure is funded through Internally Generated Funds and Borrowings, as indication of the Municipality's level of Grant Dependency in funding its capital programme. No norm is proposed at this time, but a lower result will indicate lower level of grant dependency, which indicates a stronger ability by the municipality to be financially sustainable in the longer term. It is critical that the funding mix of capital expenditure is undertaken in such a manner that affordable borrowing is directed towards addressing service delivery needs and that there is also opportunity for increased capacity on internally generated funding to attain an improved balance of the funding sources.

12.2.3.2 Source Data

Statement of Financial Position, Budget, Annual Financial Status Appendices, Notes to the Annual Financial Statements (Statement of Comparative and Actual Information), Budget, IDP, In-Year reports

12.2.3.3 Data integrity and comments

Unqualified audited annual financial statements of the municipality proves the most reliable source. In-year reports can be relied on for the purposes of ongoing and interim monitoring end reporting

12.2.3.4 Calculating the indicator

$$\text{Indicator 1} = \frac{\text{Own funded Capital Expenditure}_{\text{Internally Generated funds+Borrowings}}}{\text{Total Capital Expenditure}} \times 100$$

12.2.3.5 Results

Based on the 2018 audited annual financial statements of Stellenbosch a result of 82.13% was achieved, which indicates a low level of grant dependency to fund its capital expenditure.

12.2.3.6 Proposed Methodology and Data Improvements

The methodology followed are as proposed by National Treasury.

12.2.4 indicator 2: Total maintenance expenditure as percentage of carrying value of PPE

12.2.4.1 Target

The Ratio measures the level of repairs and maintenance to ensure adequate maintenance to prevent breakdowns and interruptions to service delivery. Repairs and maintenance of municipal assets is required to ensure the continued provision of services. A ratio result of 8% is recommended by National Treasury as an industry norm. A ratio below the norm may be a reflection that insufficient monies are being spent on repairs and maintenance to the extent that it could increase impairment of useful assets. An increasing expenditure trend may be indicative of high asset-usage levels, which can prematurely require advanced levels of Repairs and Maintenance or a need for Asset Renewal / Replacements. Also, should an increasing expenditure trend suddenly drop to lower levels without an increase in the fixed asset value, this may be indicative of challenges in spending patterns. This may also indicate that the Municipality is experiencing cash flow problems and therefore unable to spend at appropriate levels on its repairs to existing assets or purchase of new assets thus impacting negatively on service delivery.

12.2.4.2 Source Data

Statement of Financial Position, Statement of Financial Performance, IDP, Budgets and In-Year Reports.

12.2.4.3 Data integrity and comments

Unqualified audited annual financial statements of the municipality proves the most reliable source. The repairs and maintenance expense can be obtained from Table SA1 and SA34c in the latest approved MTREF budget and supporting schedules. In-year reports can be relied on for the purposes of ongoing and interim monitoring end reporting. Due to the nature of carrying value of PPE and the impact that Stellenbosch's accelerated capital investment in recent years may have had, this ratio should be seen as a guideline of average spend which need to be achieved over the longer term, considering average ageing of infrastructure on the entire asset register. Allocating repairs and maintenance correctly within mSCOA classification requirements is of essence in the calculation of this ratio.

12.2.4.4 Calculating the indicator

$$\text{Indicator 2} = \frac{\text{Total Repairs and Maintenance Expenditure}}{\text{Property, Plant and Equipment and Investment Property}_{\text{Carrying Value}}} \times 100$$

12.2.4.5 Results

Based on the 2018 audited annual financial statements of Stellenbosch a result of 0.8% was achieved, which indicates a very low level of repairs and maintenance to PPE. This may be due to lack of data integrity and availability, but may also indicate likelihood of possible impairments of PPE in future due to lack of proper maintenance. This may also result in increased spend on replacement assets as part of its annual capital programme. Over the longer term Stellenbosch should aim to improve this result to more acceptable levels.

12.2.4.6 Proposed Methodology and Data Improvements

The reasons for this low result should be investigated by the municipality. This result may be due to incomplete repairs and maintenance expense disclosure in its schedules to its latest approved budget (the repairs and maintenance expense appears to omit repairs and maintenance cost included under employee related costs, other materials and contracted services).

12.2.5 Indicator 3: Asset management plan is in place

12.2.5.1 Target

Asset management plans is vital in the context of capital expenditure as they provide the roadmap for achieving value from physical assets by optimising cost, risk and performance across the asset lifecycle. They define the implementation activities necessary to realise the municipality asset management objectives.

This indicator therefore aims to understand how the municipality is tracking previous capital expenditure, and how well current infrastructure is being monitored.

12.2.5.2 Source Data

Directorate, Infrastructure Services.

12.2.5.3 Data integrity and comments

Asset management plans listed here are the asset management plans that are in use by the municipality currently.

12.2.5.4 Calculating the indicator

The following steps were taken to determine this indicator:

- Identify if an asset management plan in place (if yes, proceed to next step, if no, score zero);
- Identify if they have been approved by municipality (if yes, proceed to next step, if no, score zero);
- Determine when last the asset management plan has been update (if equal to or less than three years, score 100%, if more than 3 years, score zero).

12.2.5.5 Results

Table 92: Indicator 3: Asset management plan is in place

Department	Asset Management Plan in Place	Approved by Municipality	Approval Date	Update Within last 3 Years (2018 FY)
Electricity	Yes	Yes	2016	Yes
Water	Yes	Yes	2017	Yes
Waste Water	Yes	Yes	2017	Yes
Solid Waste	Yes	Yes	2017	Yes
Roads, Stormwater	Yes	Yes	2015	Yes
Transport	Yes	Yes	2016	Yes
Result	1	1	1	1
Final Result				100%

12.2.5.6 Proposed Methodology and Data Improvements

The Boolean test implied in the formation of this indicator has been followed. This indicator should however consider asset registers as opposed to asset management plans.

12.2.6 Indicator 4: Number of land use applications processed in priority areas

NB: As per the IUDG description document, this indicator is dormant for 2019/20.

12.2.6.1 Target

This indicator aims to identify whether private development pressure are within the priority development areas and whether private development occurs outside the Priority Development Areas.

12.2.6.2 Source Data

The data is provided via the database of the internal system dealing with land use applications.

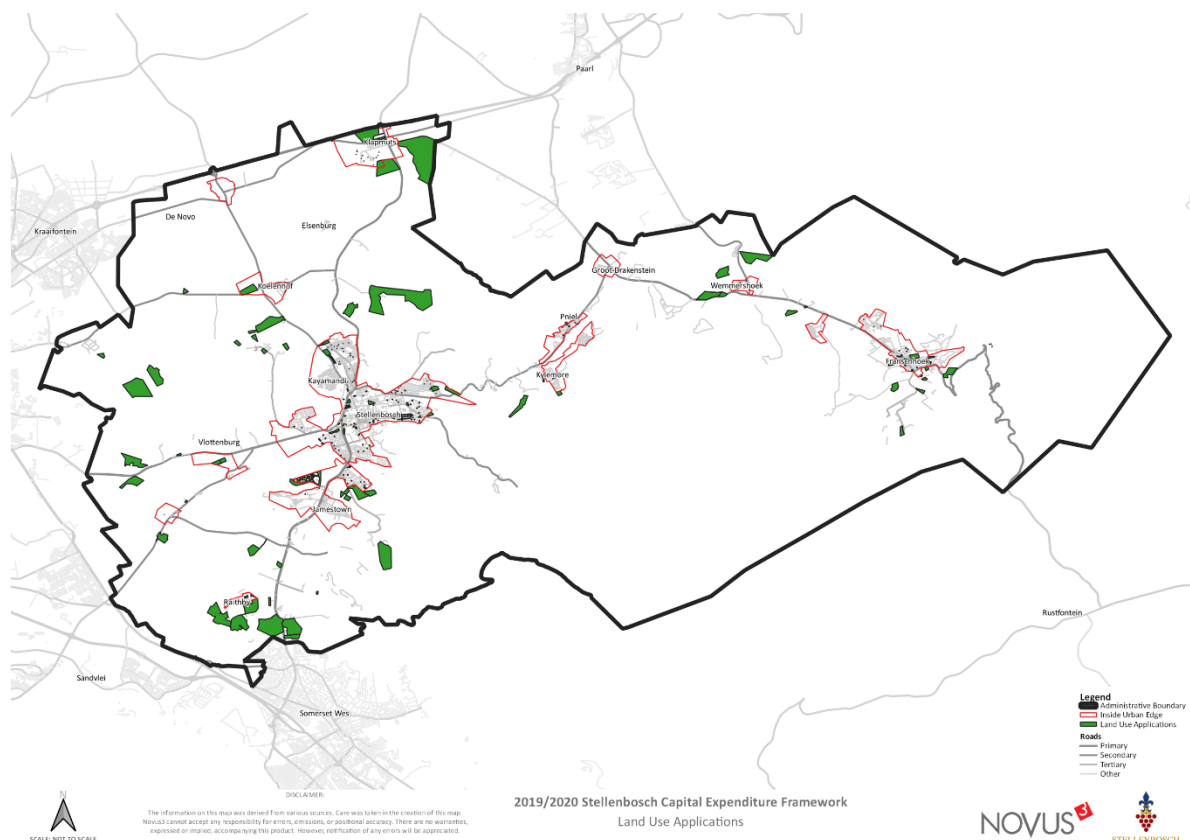
12.2.6.3 Data integrity and comments

Number of land use applications does not necessarily reflect development pressure. A land use application for a block of flats has a major impact on number of households and so on infrastructure, where a consent use for a creche does not.

12.2.6.4 Calculating the indicator

- Step 1: Collect data ranging from 2018-01-01 to 2018-12-31.
- Step 2: Clean data in order to link to the Cadastre of Stellenbosch local municipality.
- Step 3: Join the data spatially.
- Step 4: Identify Spatial Development Priority Development Areas.
- Step 5: Intersect the Cadastre and Priority Development Areas.
- Step 6: Calculate results.

12.2.6.5 Results



Map 33: Indicator 4: Number of land use applications processed in priority areas

Table 93: Indicator 4: Number of land use applications processed in priority areas

	Count	As a % of total number of land use applications	As a % of total number of land use applications joined
Total number of land use applications	376	100%	
Total number of land use applications joined	288	77%	100%
Total number of land use applications within urban edge	241	64%	84%

12.2.6.6 Proposed Methodology and Data Improvements

Municipality is in process to establish a land use application platform on an ESRI platform which will enable 100% accuracy in this indicator.

12.2.7 Indicator 5: Number of building plan applications processed in priority areas.

NB: As per the IUDG description document, this indicator is dormant for 2019/20.

12.2.7.1 Target

This indicator aims to identify whether development is being allowed outside the priority development areas. It aims to evaluate whether the municipality is aligning private development and infrastructure provision.

12.2.7.2 Source Data

The data is provided via the database of the internal system dealing with building plan applications.

12.2.7.3 Data integrity and comments

Given the fact that the data was provided from an online platform means that the data enjoys a high level of confidence, and will enjoy it even more so when the ESRI platform has been fully implemented within the Municipality.

12.2.7.4 Calculating the indicator

- Step 1: Collect data ranging from 2018-01-01 to 2018-12-31.
- Step 2: Clean data in order to link to the Cadastre of Stellenbosch local municipality.
- Step 3: Join the data spatially.
- Step 4: Identify Spatial Development Priority Development Areas.
- Step 5: Intersect the Cadastre and Priority Development Areas.
- Step 6: Calculate results.

12.2.7.5 Results

Table 94: Indicator 5: Number of building plan applications processed in priority areas

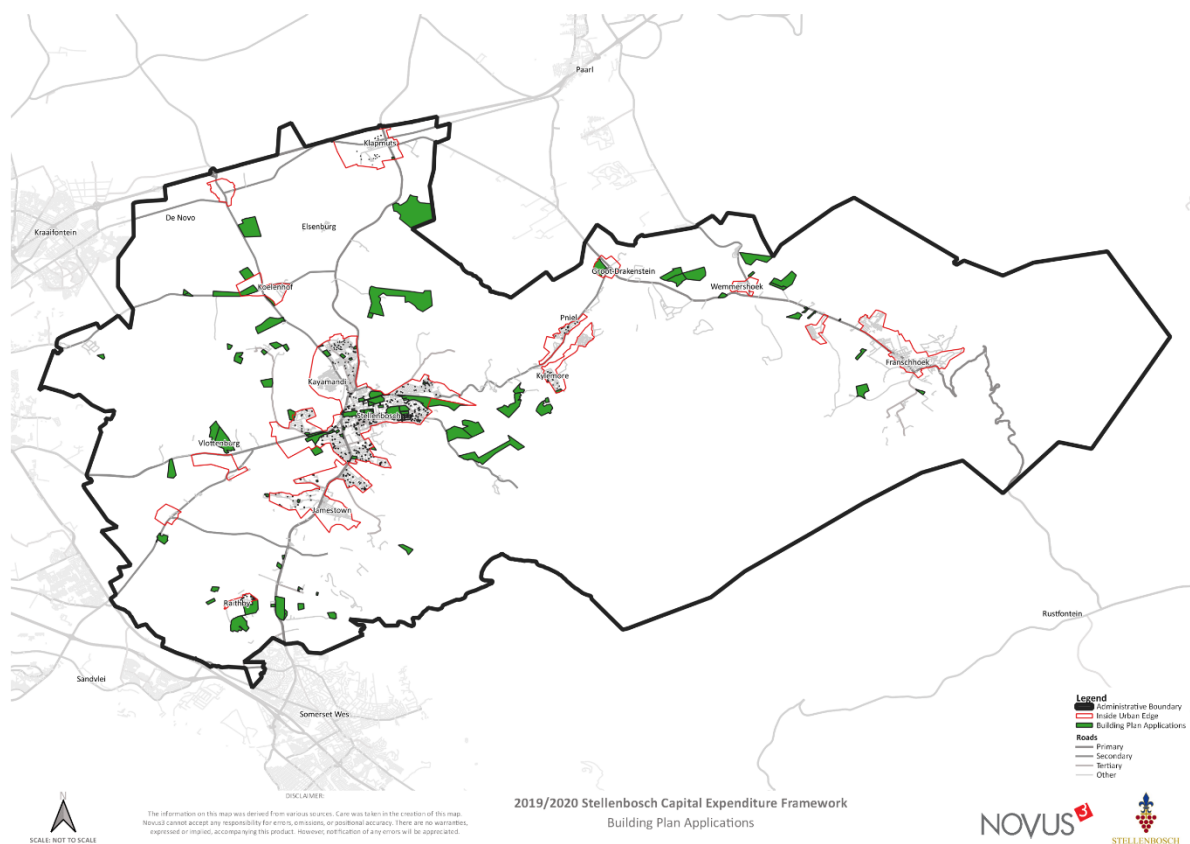
	Count	As a % of total number of building plan applications	As a % of total number of building plan applications joined
Total number of building plan applications	1 471		
Total number of building plan applications joined ³⁸	552	38%	100%
Total number of building plan applications within urban edge	488	33%	88%

12.2.7.6 Proposed Methodology and Data Improvements

The Stellenbosch Local Municipality has approved the development and integration of a GIS based management system. This system will be integrated to the. Whole municipality, and will have a spatial

³⁸ 341 of building plan applications do not have erf related information to join.

engine which enables spatial reporting. This institutional arrangement will ease the calculation of this performance indicator, and enable the calculation of other potential indicators.



Map 34: Indicator 5: Number of building plan applications processed in priority areas

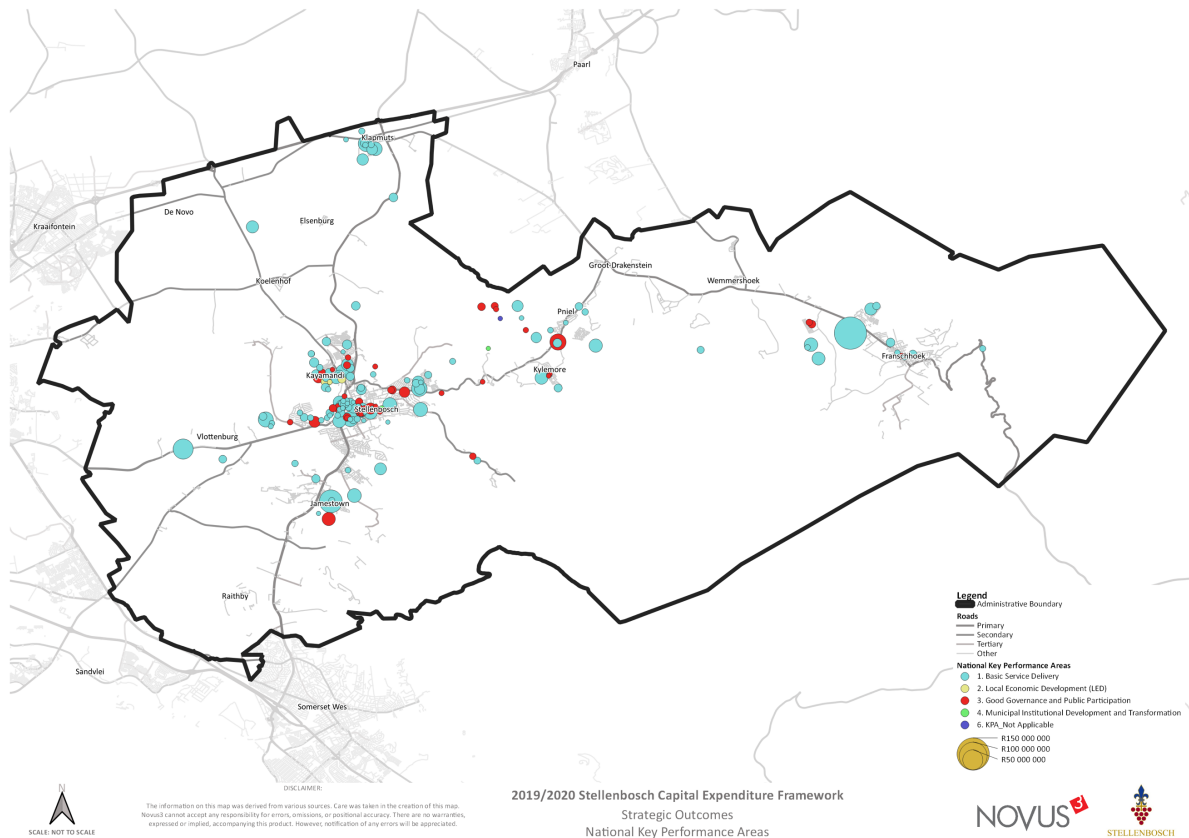
12.2.8 Summary

Table 95: Performance Indicators Summary

Performance Measure	Definition	Score Parameters	Result	Score (Unweighted)	Weight	Score (Weighted)
Indicator 1: Own funded capital expenditure (internally generated funds + borrowing) as a percentage of total capital expenditure.	Own funded capital expenditure (internally generated funds + borrowing) as a percentage of total capital expenditure	Score of 1 if 70% or higher	82%	100%	40	40,0%
		Score of 0 if 30% or lower				
		Linear scale in between				
Indicator 2: Total maintenance expenditure as percentage of carrying value of PPE and investment property.	Total maintenance expenditure as percentage of carrying value of PPE and investment property	Score of 1 if 8% or higher	0,8%	0%	30	0,0%
		Score of 0 if 2% or lower				
		Linear scale in between				
Indicator 3: Asset management plan is in place, has been approved by Municipality and has been updated in last 3 years.	Asset management plan is in place, has been approved by Municipality and has been updated in last 3 years	Score 1 if yes for all three conditions	Yes for all three	100%	30	30,0%
		Score 0 if no for any of the three conditions				
Indicator 4: Number of land use applications processed in priority areas identified in the spatial development framework as a percentage of the total number of land use applications submitted municipality-wide.	Number of land use applications processed in priority areas identified in the spatial development framework as a percentage of the total number of land use applications submitted municipality-wide.	Score of 1 if 50% or higher	84%	100%	0	Not Applicable
		Score of 0 if 10% or lower				
		Linear scale in between				
Indicator 5: Number of building plan applications processed in priority areas identified in the spatial development framework as a percentage of the total number of building plan applications submitted municipality-wide.	Number of building plan applications processed in priority areas identified in the spatial development framework as a percentage of the total number of building plan applications submitted municipality-wide.	Score of 1 if 50% or higher	88%	100%	0	Not Applicable
		Score of 0 if 10% or lower				
		Linear scale in between				
Total				67%	100	70%

12.3 Strategic Alignment

12.3.1 National Key Performance Areas



Map 35: Strategic Alignment – National Key Performance Areas

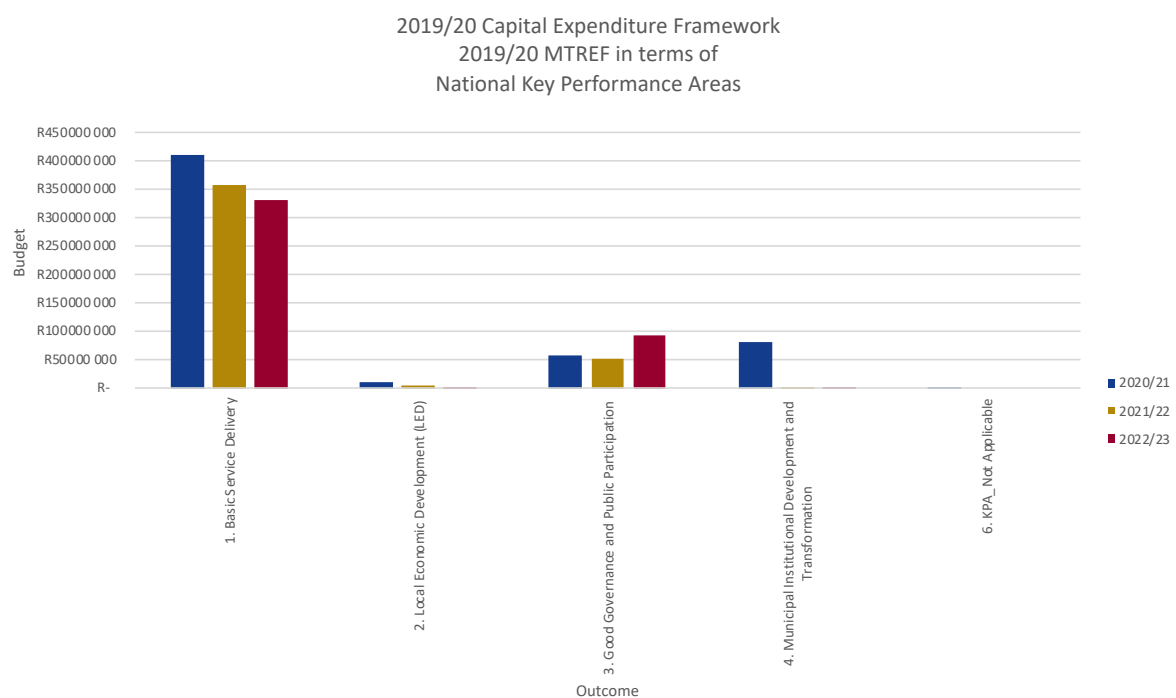


Figure 112: Strategic Alignment – National Key Performance Areas

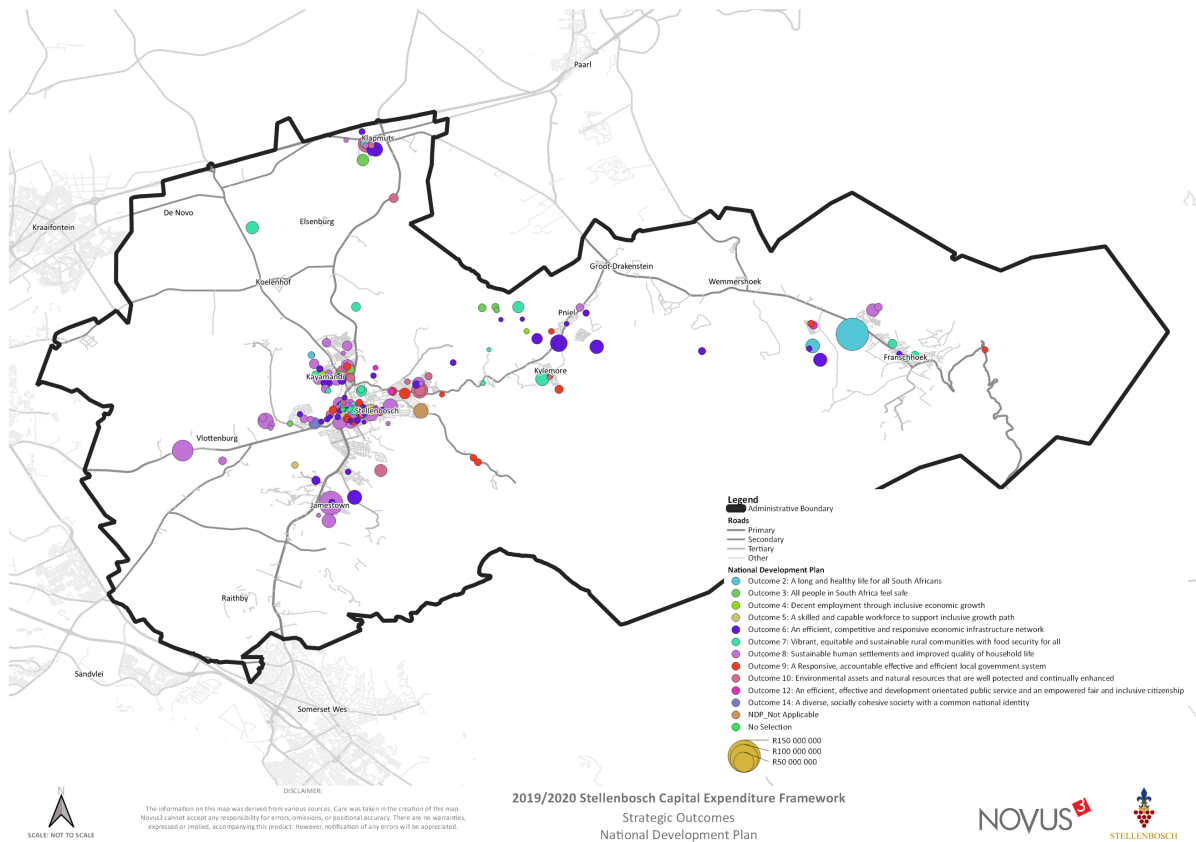
Table 96: Strategic Alignment – National Key Performance Areas

National Key Performance Areas	2019/20	2020/21	2021/22	Total	%
1. Basic Service Delivery	R409 371 528	R356 807 759	R329 644 700	R1 095 823 987	78%
2. Local Economic Development (LED)	R10 650 000	R5 750 000	R2 000 000	R18 400 000	1%
3. Good Governance Public Participation	R58 405 000	R50 505 000	R93 443 000	R202 353 000	14%
4. Municipal Institutional Development	R79 650 000	R1 550 000	R1 250 000	R82 450 000	6%
6. KPA_Not Applicable	R200 000	R-	R-	R200 000	0%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

Basic service delivery is one of the most important targets of all spheres of government. From the graph above, it is clear that Stellenbosch Local Municipality is aligned with national governments vision. The majority of capital expenditure in the MTREF relates to basic service delivery, soaring at 78%. The success of Stellenbosch Local Municipality can also be assigned to how serious it deems public participation. Good governance and public participation enjoys the second most capital expenditure in the MTREF, with 14% of the total budget.

12.3.2 National Development Plan



Map 36: Strategic Alignment – National Development Plan

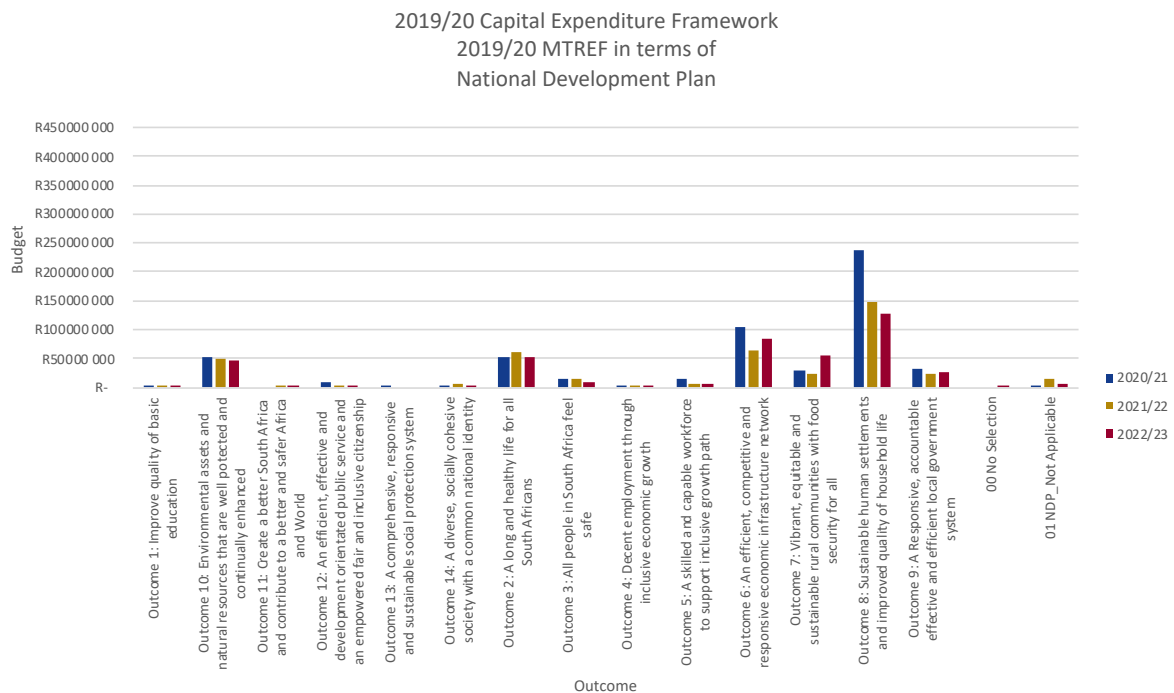


Figure 113: Strategic Alignment – National Development Plan

Table 97: Strategic Alignment – National Development Plan

National Development Plan	2019/20	2020/21	2021/22	Total	%
Outcome 1: Improve quality of basic education	R1 900 000	R1 016 800	R263 800	R3 180 600	0%
Outcome 10: Environmental assets and natural resources that are well protected and continually enhanced	R52 785 000	R50 000 000	R47 650 000	R150 435 000	11%
Outcome 11: Create a better South Africa and contribute to a better and safer Africa and World	R-	R300 000	R250 000	R550 000	0%
Outcome 12: An efficient, effective and development orientated public service and an empowered fair and inclusive citizenship	R8 850 000	R2 400 000	R1 000 000	R12 250 000	1%
Outcome 13: A comprehensive, responsive and sustainable social protection system	R100 000	R-	R-	R100 000	0%
Outcome 14: A diverse, socially cohesive society with a common national identity	R4 000 000	R5 000 000	R3 000 000	R12 000 000	1%
Outcome 2: A long and healthy life for all South Africans	R52 310 000	R60 504 431	R54 020 000	R166 834 431	12%
Outcome 3: All people in South Africa feel safe	R14 251 528	R14 001 528	R9 050 000	R37 303 056	3%
Outcome 4: Decent employment through inclusive economic growth	R2 300 000	R1 200 000	R1 000 000	R4 500 000	0%
Outcome 5: A skilled and capable workforce to support inclusive growth path	R14 960 000	R5 670 000	R5 350 000	R25 980 000	2%
Outcome 6: An efficient, competitive and responsive economic infrastructure network	R105 290 000	R64 425 000	R85 450 000	R255 165 000	18%
Outcome 7: Vibrant, equitable and sustainable rural communities with food security for all	R30 100 000	R22 450 000	R56 750 000	R109 300 000	8%
Outcome 8: Sustainable human settlements and improved quality of household life	R237 660 000	R148 965 000	R128 228 900	R514 853 900	37%
Outcome 9: A Responsive, accountable effective and efficient local government system	R32 170 000	R23 680 000	R26 575 000	R82 425 000	6%
00 No Selection	R-	R-	R1 350 000	R1 350 000	0%
01 NDP_Not Applicable	R1 600 000	R15 000 000	R6 400 000	R23 000 000	2%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

In terms of the National Development Plan, Stellenbosch is aligning its budget primarily to sustainable human settlement – 37% in the total MTREF.

Map 37: Strategic Alignment – Integrated Urban Development Framework

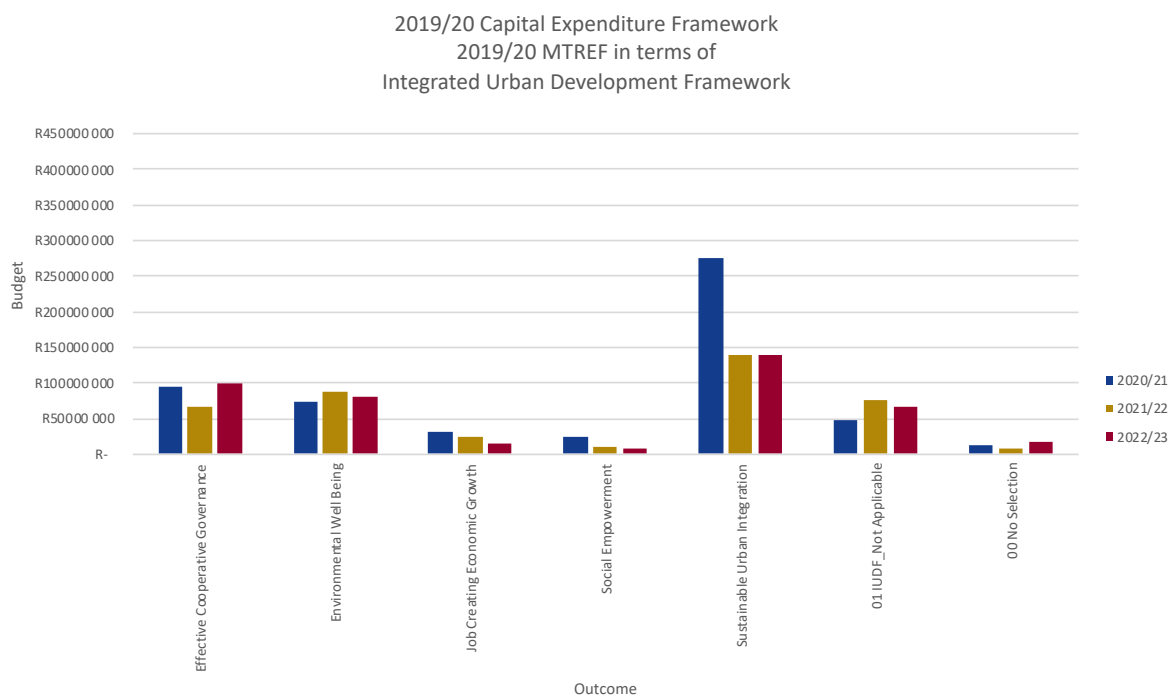


Figure 114: Strategic Alignment – Integrated Urban Development Framework

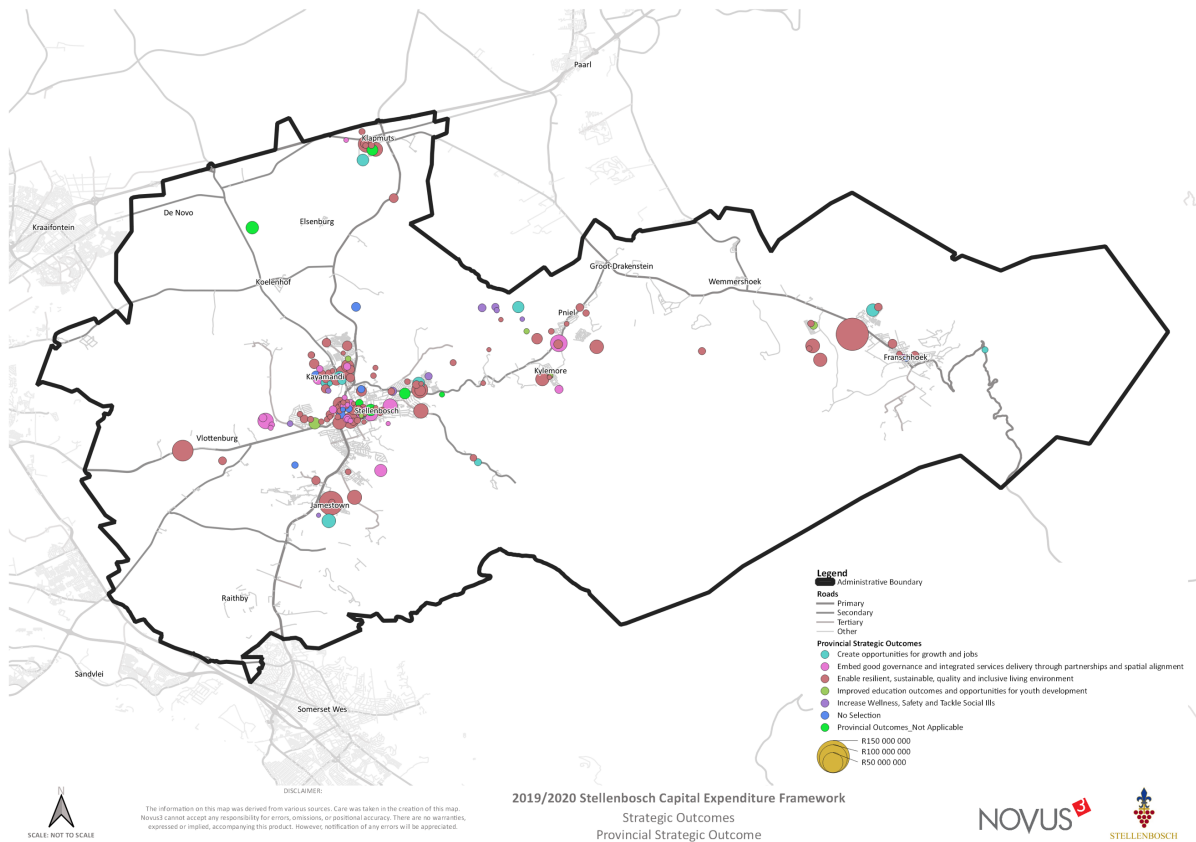
Integrated Urban Development Framework	2019/20	2020/21	2021/22	Total	%
Effective Cooperative Governance	R94 065 000	R67 620 000	R99 445 000	R261 130 000	19%
Environmental Well Being	R73 081 528	R88 816 528	R80 215 000	R242 113 056	17%
Job Creating Economic Growth	R32 150 000	R23 730 000	R15 000 000	R70 880 000	5%
Social Empowerment	R24 450 000	R11 261 800	R7 483 800	R43 195 600	3%
Sustainable Urban Integration	R275 030 000	R139 750 000	R139 843 900	R554 623 900	40%
01 IUDF_Not Applicable	R47 000 000	R76 184 431	R67 500 000	R190 684 431	14%
00 No Selection	R12 500 000	R7 250 000	R16 850 000	R36 600 000	3%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Table 98: Strategic Alignment – Integrated Urban Development Framework

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

When considering the Stellenbosch MTREF in terms of the Integrated Urban Development Framework objectives, it is clear that Stellenbosch is aligning capital expenditure with the IUDF objectives. 40% of the MTREF is aligned to sustainable Urban Integration – the principle that most would argue is the foundation of the Integrated Urban Development Framework. 19% of the Stellenbosch MTREF is assigned to Effective Corporate Governance and Environmental Well Being collectively, with the remainder allocated to social empowerment and job creation.

12.3.4 Provincial Strategic Outcomes



Map 38: Strategic Alignment – Provincial Outcomes

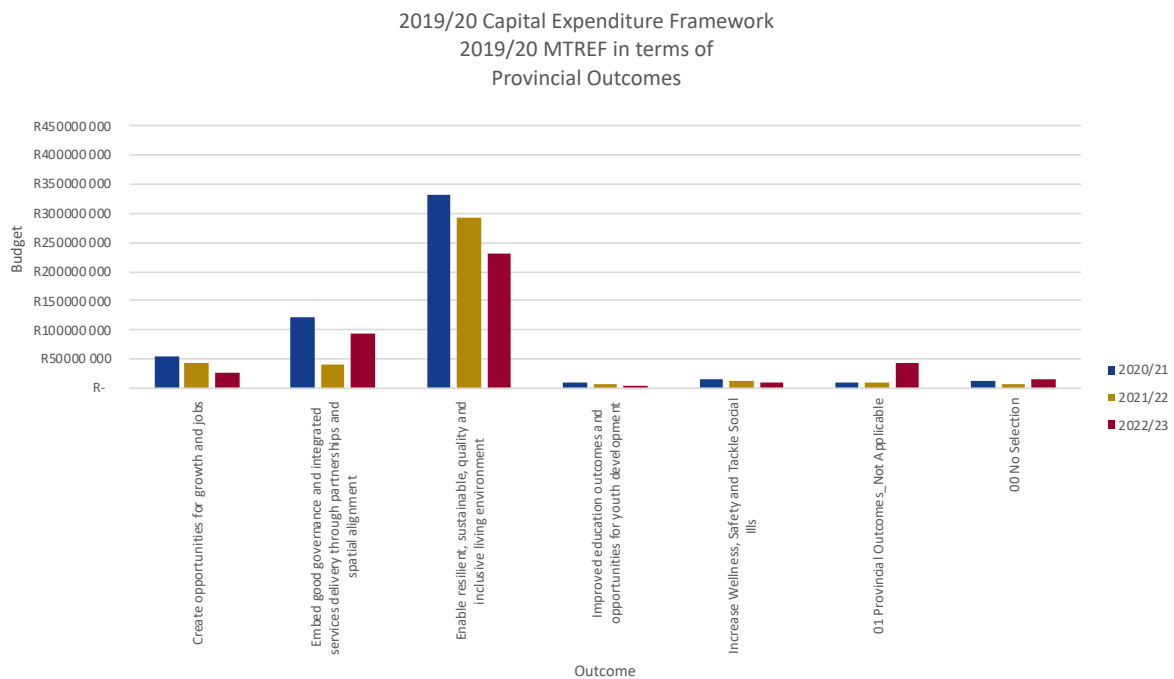


Figure 115: Strategic Alignment – Provincial Outcomes

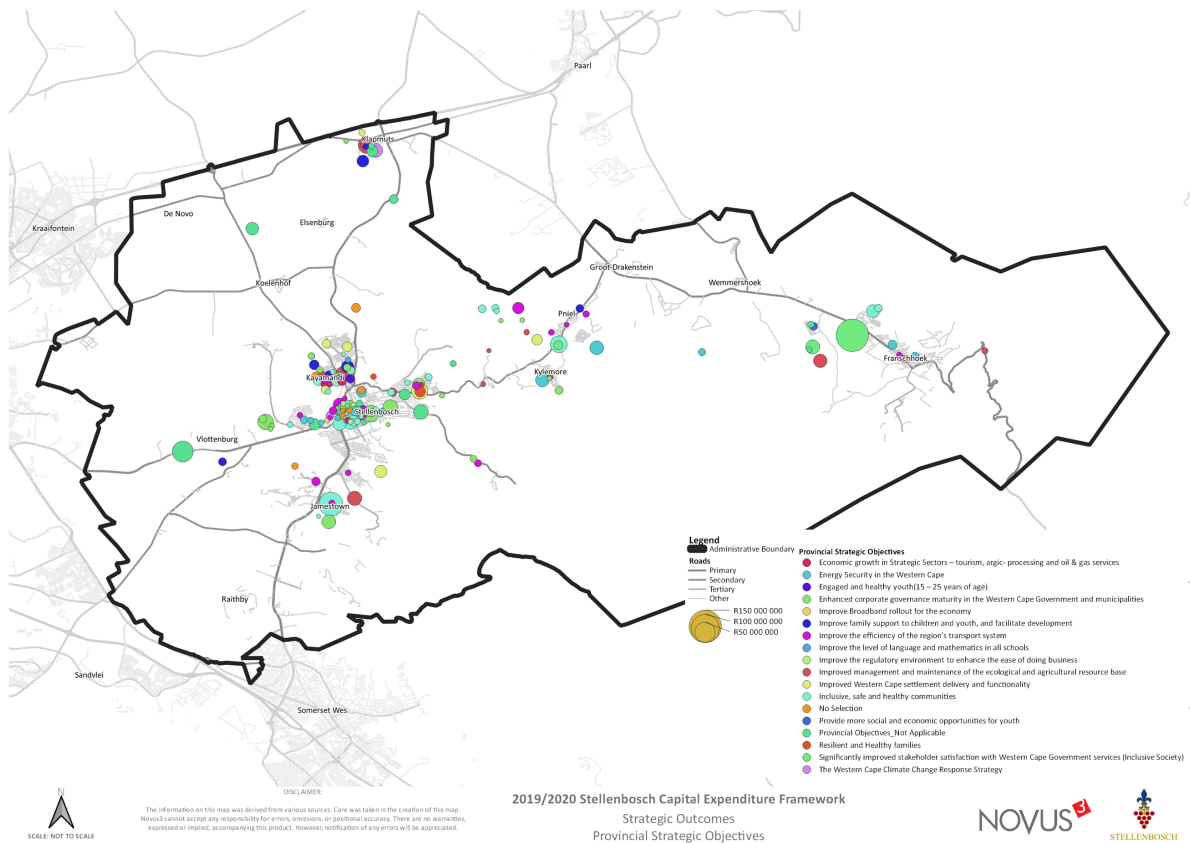
Provincial Outcomes	2019/20	2020/21	2021/22	Total	%
Create opportunities for growth and jobs	R55 786 528	R44 318 328	R26 858 800	R126 963 656	9%
Embed good governance and integrated services delivery through partnerships and spatial alignment	R122 145 000	R39 995 000	R93 720 000	R255 860 000	18%
Enable resilient, sustainable, quality and inclusive living environment	R332 750 000	R292 634 431	R231 548 900	R856 933 331	61%
Improved education outcomes and opportunities for youth development	R9 715 000	R6 640 000	R4 960 000	R21 315 000	2%
Increase Wellness, Safety and Tackle Social Ills	R15 950 000	R13 600 000	R9 750 000	R39 300 000	3%
01 Provincial Outcomes_Not Applicable	R9 430 000	R10 175 000	R42 650 000	R62 255 000	4%
00 No Selection	R12 500 000	R7 250 000	R16 850 000	R36 600 000	3%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Table 99: Strategic Alignment – Provincial Outcomes

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

In terms of the provincial outcomes, capital expenditure is best aligned with resilient sustainable quality and inclusive living environments with a 61% of the MTREF allocated to this outcome.

12.3.5 Provincial Strategic Objectives



Map 39: Strategic Alignment – Provincial Objectives

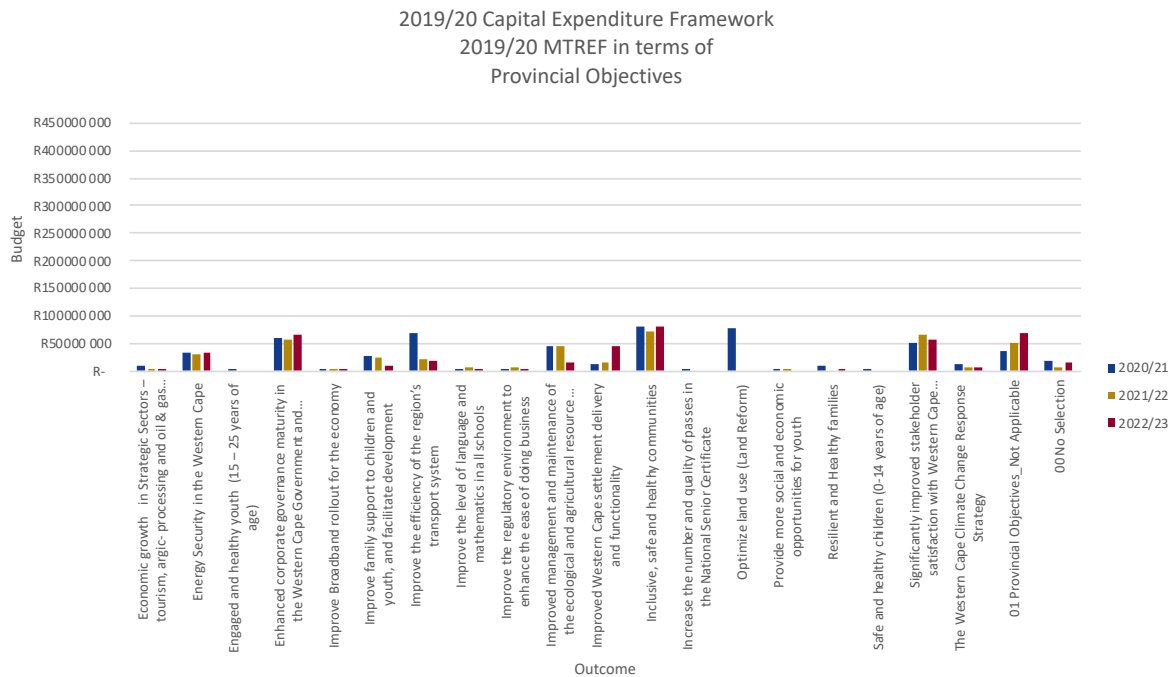


Figure 116: Strategic Alignment – Provincial Objectives

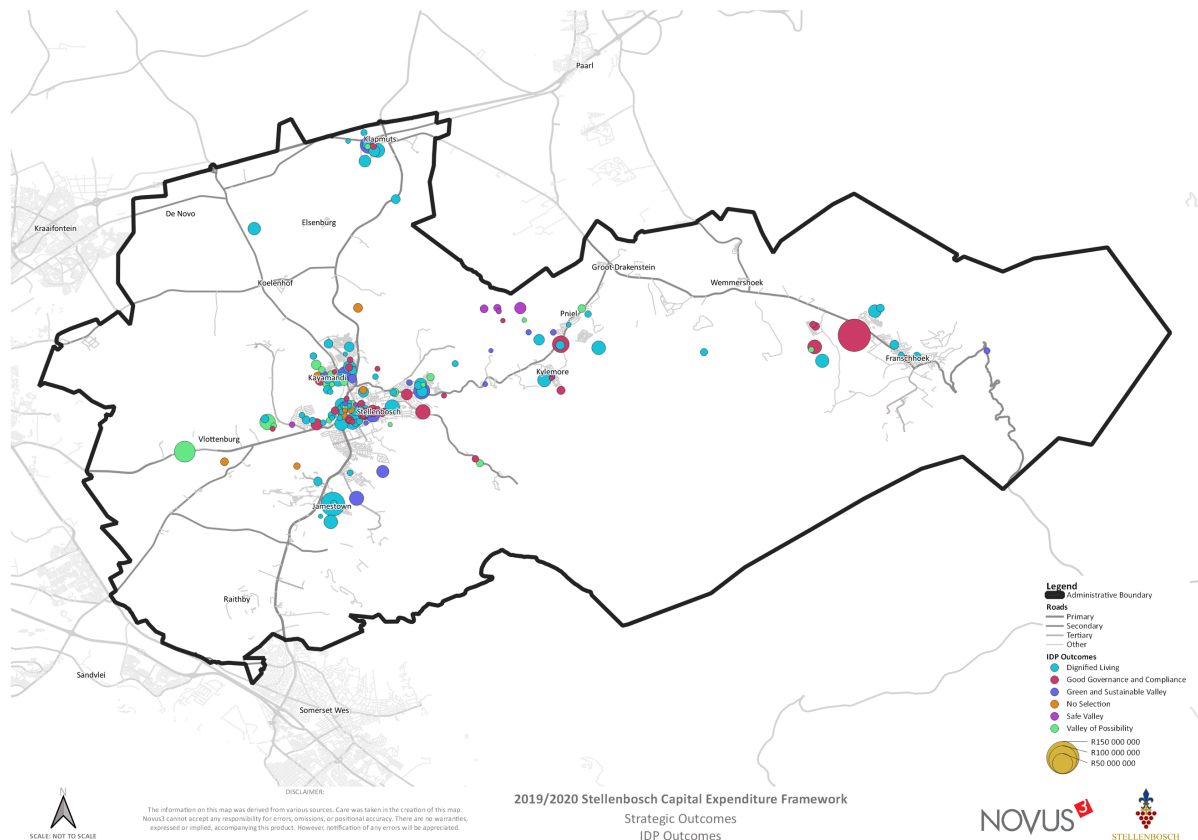
Provincial Objectives	2019/20	2020/21	2021/22	Total	%
Economic growth in Strategic Sectors – tourism, agric- processing and oil & gas services	R9 650 000	R4 750 000	R250 000	R14 650 000	1%
Energy Security in the Western Cape	R34 290 000	R30 500 000	R32 550 000	R97 340 000	7%
Engaged and healthy youth (15 – 25 years of age)	R5 000 000	R-	R-	R5 000 000	0%
Enhanced corporate governance maturity in the Western Cape Government and municipalities	R58 635 000	R57 125 000	R64 720 000	R180 480 000	13%
Improve Broadband rollout for the economy	R1 840 000	R1 450 000	R1 150 000	R4 440 000	0%
Improve family support to children and youth, and facilitate development	R26 686 528	R25 666 528	R10 000 000	R62 353 056	4%
Improve the efficiency of the region's transport system	R69 850 000	R21 450 000	R19 450 000	R110 750 000	8%
Improve the level of language and mathematics in all schools	R4 650 000	R5 300 000	R4 250 000	R14 200 000	1%
Improve the regulatory environment to enhance the ease of doing business	R1 520 000	R5 245 000	R2 170 000	R8 935 000	1%
Improved management and maintenance of the ecological and agricultural resource base	R45 485 000	R45 950 000	R16 450 000	R107 885 000	8%
Improved Western Cape settlement delivery and functionality	R11 160 000	R15 596 800	R46 129 700	R72 886 500	5%
Inclusive, safe and healthy communities	R81 045 000	R71 655 000	R79 778 000	R232 478 000	17%
Increase the number and quality of passes in the National Senior Certificate	R300 000	R-	R-	R300 000	0%
Optimize land use (Land Reform)	R77 500 000	R-	R-	R77 500 000	6%
Provide more social and economic opportunities for youth	R3 700 000	R300 000	R-	R4 000 000	0%
Resilient and Healthy families	R10 000 000	R-	R1 000 000	R11 000 000	1%
Safe and healthy children (0-14 years of age)	R550 000	R-	R-	R550 000	0%
Significantly improved stakeholder satisfaction with Western Cape Government services (Inclusive Society)	R51 200 000	R65 884 431	R56 700 000	R173 784 431	12%
The Western Cape Climate Change Response Strategy	R11 500 000	R6 500 000	R6 500 000	R24 500 000	2%
01 Provincial Objectives_Not Applicable	R36 215 000	R49 990 000	R68 390 000	R154 595 000	11%
00 No Selection	R17 500 000	R7 250 000	R16 850 000	R41 600 000	3%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Table 100: Strategic Alignment – Provincial Objectives

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

When viewing the Stellenbosch MTREF in the context of Provincial objectives, it can be seen that capital expenditure is aligned towards good governance, safety, maintenance and human settlements.

12.3.6 IDP Outcomes



Map 40: Strategic Alignment – IDP Outcome

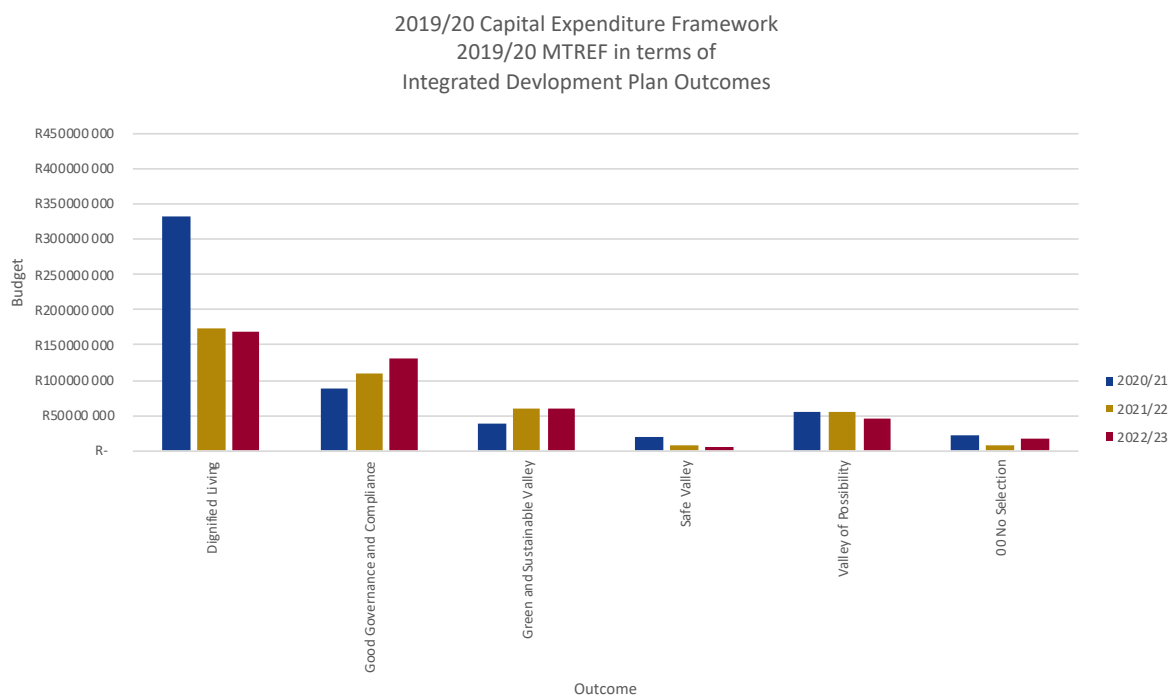


Figure 117: Strategic Alignment – IDP Outcome

IDP Outcomes	2020/21	2021/22	2022/23	Total	%
Dignified Living	R332 691 528	R173 901 528	R167 770 900	R674 363 956	48%
Good Governance and Compliance	R88 675 000	R110 046 231	R130 301 800	R329 023 031	24%
Green and Sustainable Valley	R38 870 000	R60 295 000	R59 545 000	R158 710 000	11%
Safe Valley	R20 110 000	R6 970 000	R5 070 000	R32 150 000	2%
Valley of Possibility	R56 180 000	R55 900 000	R46 600 000	R158 680 000	11%
00 No Selection	R21 750 000	R7 500 000	R17 050 000	R46 300 000	3%
Grand Total	R558 276 528	R414 612 759	R426 337 700	R1 399 226 987	100%

Table 101: Strategic Alignment – IDP Outcome

Strategic alignment is facilitated on the Capital Planning, Prioritisation and Performance platform. It plays a critical role in Prioritisation of projects and enables Stellenbosch Local Municipality to start investigating whether or not capital expenditure is in line with the strategic priorities of other spheres of government. Please note that No Selection in the table above refers to projects that do not have data captured in this regard.

The majority of Capital expenditure is assigned to dignified living in terms of the Stellenbosch IDP outcomes. Almost 49% of the Capital Budget in the MTREF will be assigned to Dignified Living, with only 2% to safe Valley.

Section 13 Annexures



13 Annexures

13.1 Annexure 1: Profile of Stellenbosch Nodal Points

Annexure 1: Profile of Stellenbosch Nodal Points

	Node name	Total for municipality	Rural nodes										Urban nodes		
			La Motte	Wemmershoek	Lanquedoc	Pniel	Groot Drakenstein	Raithby	Lynedoch	Vlottenburg	Koelenhof	Muldersvlei Cross Road	Stellenbosch	Franschhoek	Klapmuts
Population	Area (ha)	84 879	69	66	184	119	98	45	78	153	182	105	2 868	485	450
	Pop96	104 354	906	190	1 483	1 983	102	262	35	98	150	50	54 466	5 692	1 576
	Pop01	118 976	50	554	3 527	2 412	71	34	50	99	118	98	56 725	7 909	4 176
	Pop11	155 711	1 606	859	7 233	1 725	118	440	164	334	448	72	78 638	14 521	7814
	Pop/ha96	1.23	13.13	2.88	8.06	16.66	1.04	5.82	0.45	0.64	0.82	0.48	18.99	11.74	3.50
	Pop/ha01	1.40	0.72	8.39	19.17	20.27	0.72	0.76	0.64	0.65	0.65	0.93	19.78	16.31	9.28
	Pop/ha11	1.83	23.28	13.02	39.31	14.50	1.20	9.78	2.10	2.18	2.46	0.69	27.42	29.94	17.36
Households	Hh96	26 155	154	38	286	434	19	72	11	24	39	14	14 310	1 322	341
	Hh01	29 121	10	104	687	566	14	8	12	23	28	24	14 598	1 928	972
	Hh11	43 328	397	202	1 645	428	27	105	36	86	97	17	23 744	4 785	1966
	Hh/ha96	0.31	2.23	0.58	1.55	3.65	0.19	1.60	0.14	0.16	0.21	0.13	4.99	2.73	0.76
	Hh/ha01	0.34	0.14	1.58	3.73	4.76	0.14	0.18	0.15	0.15	0.15	0.23	5.09	3.98	2.16
	Hh/ha11	0.51	5.75	3.06	8.94	3.60	0.28	2.33	0.46	0.56	0.53	0.16	8.28	9.87	4.37
	Hhsize96	3.99	5.88	5.00	5.19	4.57	5.37	3.64	3.18	4.08	3.85	3.57	3.81	4.31	4.62
	Hhsize01	4.09	5.00	5.33	5.13	4.26	5.07	4.25	4.17	4.30	4.21	4.08	3.89	4.10	4.30
	Hhsize11	3.59	4.05	4.25	4.40	4.03	4.37	4.19	4.56	3.88	4.62	4.24	3.31	3.03	3.97
Dwelling frame - Number of structures	DF18Dwell	42 892	394	198	1 910	696	86	131	36	162	36	43	24 672	5 443	2 071
	DF18Bus	905	4	0	3	2	7	0	0	8	10	12	499	66	26
	DF18SDI	3 426	1	1	0	1	0	0	1	0	0	0	3 075	106	1
	DF18SU	209	1	1	6	2	1	1	2	0	1	2	90	15	21
	DF18RU	68	0	0	8	1	0	5	0	0	0	0	34	9	3

	Node name	Total for municipality	Rural nodes										Urban nodes		
			La Motte	Wemmershoek	Lanquedoc	Pniel	Groot Drakenstein	Raithby	Lynedoch	Vlottenburg	Koelenhof	Muldersvlei Cross Road	Stellenbosch	Franschhoek	Klapmuts
	DF18OU	4 825	6	47	56	23	20	3	18	46	28	35	796	115	83
	DF18Vac	1 552	9	4	106	61	1	6	18	36	64	1	514	292	183
	DF18Tot	53 877	415	251	2 089	786	115	146	75	252	139	93	29 680	6 046	2 388
Schools - number	PSch	29	0	1	1	1	0	1	1	1	1	0	14	3	1
	SSCh	11	0	0	0	0	0	0	0	0	0	0	9	1	0
	Isch	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	CSch	5	0	0	0	0	0	0	0	0	0	0	0	1	0
Facilities - number	PubHealth	14	0	0	1	0	1	0	0	0	0	0	9	2	1
	PrivHealth	1	0	0	0	0	0	0	0	0	0	0	1	0	0
	SAPS	5	0	0	0	0	1	0	0	0	0	0	2	1	1
	LowerCrt	2	0	0	0	0	0	0	0	0	0	0	1	0	0
Land cover 1990 (non-urban) - ha	Cultivated commercial fields	4 215.52			7.83	0.20		0.03	0.05	17.64	0.13	0.63	43.62	2.95	63.76
	Cultivated commercial pivot	0.00													
	Cultivated orchard and vines	19 690.08	1.54			6.85	3.20	9.78	43.02	47.55	13.33	3.93	229.69	89.93	43.29
	Sugarcane	0.00													
	Subsistence farming	0.00													
	Forests & Plantations	8 019.04	17.28	21.01	7.00	10.72						4.08	160.14	7.69	
	Mining	0.00													
Land cover 2014 (non-urban)	Cultivated commercial fields	3 992.47			6.51	0.63		0.01		15.05	0.11	0.47	30.36	2.65	66.36
	Cultivated commercial pivot	84.11													
	Cultivated orchard and vines	19 435.82	1.81	0.04	0.35	6.81	2.83	6.33	47.34	48.55	14.49	4.17	166.41	88.95	42.22
	Sugarcane	0.00													
	Subsistence farming	0.00													

	Node name	Total for municipality	Rural nodes										Urban nodes		
			La Motte	Wemmershoek	Lanquedoc	Pniel	Groot Drakenstein	Raithby	Lynedoch	Vlottenburg	Koelenhof	Muldersvlei Cross Road	Stellenbosch	Franschhoek	Klapmuts
Land cover 1990 (urban) - ha	Forests & Plantations	3 010.11	2.75			8.94						3.35	42.91	1.06	
	Mining	61.63									17.06				
	Urban built-up	24.06		0.15							0.69				1.63
	Urban commercial	339.57						0.23		1.62			277.28	7.94	1.27
	Urban industrial	484.27		4.16			9.57		3.47	11.29	3.58		158.47	4.60	3.24
	Urban residential	990.39		13.33			2.00	18.61		1.39			789.48	88.56	25.69
	Urban townships	393.13	11.06		58.88	62.40				6.18			87.20	36.58	2.43
	Urban informal	1.27											1.27		
	Rural villages														
	Urban sports and golf	290.37		4.72									192.73	4.16	
	School and sports grounds	132.96		1.52	3.96			2.77	6.93		3.94		65.75	19.74	0.69
Land cover 2014 (urban) - ha	Small holdings	187.48						2.38					37.03	4.74	
	Urban built-up	37.63		0.02	0.01						0.23		15.66		3.81
	Urban commercial	349.73						0.45		0.82			300.32	5.26	0.54
	Urban industrial	431.75		2.09			6.53		1.63	8.46	2.09		139.41	3.83	1.82
	Urban residential	955.06		11.53			0.98	14.69		0.43	1.27		749.63	99.34	18.73
	Urban townships	481.13	23.58		75.60	58.88				2.74			123.40	54.68	40.03
	Urban informal	51.53											35.16	12.45	
	Rural villages														
	Urban sports and golf	392.42		3.47									268.24	5.31	3.12
	School and sports grounds	102.58		0.92	3.35			1.50	4.85		2.43		49.46	16.86	0.35
	Small holdings	419.60						12.84					65.59	3.81	
Roads (km)	National	22.96	0	0	0	0	0	0	0	0	0	0	0	0	0
	Arterial	118.72	0.21	0.77	0	0.35	1.8	0	1	1.05	2.79	1.96	11	0.83	3.37

Node name	Total for municipality	Rural nodes										Urban nodes		
		La Motte	Wemmershoek	Lanquedoc	Pniel	Groot Drakenstein	Raithby	Lynedoch	Vlottenburg	Koelenhof	Muldersvlei Cross Road	Stellenbosch	Franschhoek	Klapmuts
Secondary	37.35	1	0	0	0	0	0	0.24	0	0.2	0	0	0.04	0.39
Tertiary	555.81	1.79	0.12	4.14	1.78	4.24	0.55	0.61	3.2	2.42	0.57	12.75	3.41	6.48
Main (Urban)	54.33	0	0	0	1.15	0	0	0	0	0	0	25.14	2.31	1.01
Streets (Urban)	229.63	0	0	0	0	0	0	0	0	0	0.36	165.1	31.64	0
Total roads	1018.8	3	0.89	4.14	3.28	6.04	0.55	1.85	4.25	5.41	2.89	213.99	38.23	11.25

13.2 Annexure 2: Classification of service access data from the census

Annexure 2: Classification of service access data from the census

This annexure shows how census data was classified by MapAble® in order to be represented as access to different access categories used in national service delivery policies.

■ Water services

Census 1996		Census 2001		Census 2011	
Piped water in dwelling	Full	Piped water inside dwelling	Full	Piped (tap) water inside dwelling/institution	Full
Piped water on site	Intermediate	Piped water inside yard	Intermediate	Piped (tap) water inside yard	Intermediate
Public tap	Basic	Piped water on community stand distance < 200m from dwelling	Basic	Piped (tap) water on community stand: distance less than 200m from dwelling/institution	Basic
Water-carrier/tanker	Below basic	Piped water on community stand distance > 200m from dwelling	Below basic	Piped (tap) water on community stand: distance between 200m and 500m from dwelling/institution	Below basic
Borehole/rainwater tank/well	Below basic	Borehole	Below basic	Piped (tap) water on community stand: distance between 500m and 1000m (1km) from dwelling/institution	Below basic
Dam/river/stream/spring	None	Spring	Below basic	Piped (tap) water on community stand: distance greater than 1000m (1km) from dwelling/institution	Below basic
Other	None	Rain-water tank	Below basic	No access to piped (tap) water	None
Unspecified/Dummy	None	Dam/pool/stagnant water	None	Unspecified	None
		River/stream	None	Not applicable	None
		Water vendor	Basic		
		Other	None		

■ Sanitation services

Census 1996		Census 2001		Census 2011	
Flush or chemical toilet	Full	Flush toilet (connected to sewerage system)	Full	Flush toilet (connected to sewerage system)	Full
Pit latrine	Below basic	Flush toilet (with septic tank)	Full	Flush toilet (with septic tank)	Full
Bucket latrine	Below basic	Chemical toilet	Intermediate	Chemical toilet	Intermediate
None of the above	None	Pit latrine with ventilation (VIP)	Basic	Pit toilet with ventilation (VIP)	Basic
Unspecified/Dummy	None	Pit latrine without ventilation	Below basic	Pit toilet without ventilation	Below basic
		Bucket latrine	Below basic	Bucket toilet	Below basic
		None	None	Other	Below basic
				Unspecified	None
				Not applicable	None
				None	None

■ Electricity services

Census 1996		Census 2001		Census 2011	
Electricity direct from authority	Full	Electricity	Full	Electricity	Full

Electricity from other source	Full	Gas	None	Gas	None
Gas	None	Paraffin	None	Paraffin	None
Paraffin	None	Candles	None	Candles (not a valid option)	None
Candles	None	Solar	Full	Solar	Full
Other	None	Other	None	None	None
Unspecified/Dummy	None			Unspecified	None
				Not applicable	None

▪ Refuse removal services

Census 1996		Census 2001		Census 2011	
Removed by local authority at least weekly	Full	Removed by local authority at least once a week	Full	Removed by local authority/private company at least once a week	Full
Removed by local authority less often	Intermediate	Removed by local authority less often	Intermediate	Removed by local authority/private company less often	Intermediate
Communal refuse dump	Basic	Communal refuse dump	Basic	Communal refuse dump	Basic
Own refuse dump	Below basic	Own refuse dump	Below basic	Own refuse dump	Below basic
No rubbish disposal	None	No rubbish disposal	None	No rubbish disposal	None
Other	None			Other	None
Unspecified/Dummy	None			Unspecified	None
				Not applicable	None

13.3 Annexure 3: Details of modelled growth requirements

Annexure 3: Details of modelled growth requirements

▪ Land demand per annum

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total area (ha)	95.5	100.7	98.2	100.8	98.3	100.4	97.2	100.7	101.1	98.0
Residential	55.9	56.3	56.3	56.3	56.3	55.9	56.3	56.3	56.3	56.3
Low density	12.5	12.9	12.9	12.9	12.9	12.5	12.9	12.9	12.9	12.9
Medium density	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.1
High density	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2	23.2
Business	2.3	5.1	2.7	5.1	2.7	5.1	2.7	5.1	5.5	2.3
Retail/Office	2.3	5.1	2.3	5.1	2.3	5.1	2.3	5.1	5.1	2.3
Market/trading area	0.0	0.0	0.3	0.0	0.3	0.0	0.3	0.0	0.3	0.0
Industrial	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Light industrial	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Heavy industrial	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Public spaces	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
Parks: public	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Sports fields	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Stadiums	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Civic facilities	0.0	1.7	1.7	1.8	1.7	1.8	0.1	1.7	1.7	1.8
Community centre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Community hall	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Libraries	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Clinics	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fire station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ambulance station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cemeteries	0.0	1.7	1.7	1.7	1.7	1.7	0.0	1.7	1.7	1.7
Public parking areas	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.1
Taxi ranks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Public utilities	0.6	0.9	0.9	0.9	0.9	0.9	1.4	0.9	0.9	0.9
Post office	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Police station	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hospital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Day hospital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hospice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Old age home	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Children's homes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Place of worship	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Crèche	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nursery school	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Primary school	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
Secondary school	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After school centre	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Technical college	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Roads	18.4	18.4	18.3	18.4	18.4	18.4	18.4	18.4	18.4	18.4
No surface	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Graded	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gravel	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paved	18.4	18.4	18.3	18.4	18.4	18.4	18.4	18.4	18.4	18.4

■ Customer units added per annum

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total customers	1 166	1 262	1 243	1 241	1 261	1 235	1 275	1 242	1 237	1 259
Residential	1 143	1 231	1 212	1 211	1 231	1 202	1 243	1 211	1 204	1 231
Low density	393	453	453	433	453	414	453	433	453	453
Medium density	393	394	394	394	394	423	406	394	394	394
High density	357	384	365	384	384	365	384	384	357	384
Business	5	8	8	7	7	8	8	7	9	6
Retail/Office	5	8	7	7	6	8	7	7	8	6
Market/trading area	0	0	1	0	1	0	1	0	1	0
Industrial	5	6	7	6	5	7	6	7	6	5
Light industrial	4	5	5	5	4	5	5	5	5	4
Heavy industrial	1	1	2	1	1	2	1	2	1	1
Public spaces	11	13	12	12	13	12	12	13	12	12
Parks: public	3	3	3	3	3	3	3	3	3	3
Sports fields	4	5	4	5	5	4	5	5	4	5
Stadiums	4	5	5	4	5	5	4	5	5	4
Civic facilities	0	1	1	2	1	2	2	1	1	2
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	1	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	1	1	1	1	1	0	1	1	1
Public parking areas	0	0	0	1	0	0	1	0	0	1
Taxi ranks	0	0	0	0	0	0	1	0	0	0
Public utilities	2	4	4	4	5	5	5	4	5	4
Post office	0	0	0	0	1	0	0	0	1	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	1	1	2	1	1	2	1	1	2	1
Crèche	1	2	1	2	2	1	2	2	1	2
Nursery school	0	1	1	1	1	1	1	1	1	1
Primary school	0	0	0	0	0	0	1	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	1	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Number of stands required per annum

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total stands	788	803	801	801	802	803	805	802	801	800
Residential	765	771	769	770	771	769	772	770	768	771
Low density	241	243	243	242	243	243	243	242	243	243
Medium density	287	288	288	288	288	288	289	288	288	288
High density	237	240	238	240	240	238	240	240	237	240
Business	5	8	8	7	7	8	8	7	9	6
Retail/Office	5	8	7	7	6	8	7	7	8	6
Market/trading area	0	0	1	0	1	0	1	0	1	0
Industrial	5	6	7	6	5	7	6	7	6	5
Light industrial	4	5	5	5	4	5	5	5	5	4
Heavy industrial	1	1	2	1	1	2	1	2	1	1
Public spaces	11	13	12	12	13	12	12	13	12	12
Parks: public	3	3	3	3	3	3	3	3	3	3
Sports fields	4	5	4	5	5	4	5	5	4	5
Stadiums	4	5	5	4	5	5	4	5	5	4
Civic facilities	0	1	1	2	1	2	2	1	1	2
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	1	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	1	1	1	1	1	0	1	1	1
Public parking areas	0	0	0	1	0	0	1	0	0	1
Taxi ranks	0	0	0	0	0	0	1	0	0	0
Public utilities	2	4	4	4	5	5	5	4	5	4
Post office	0	0	0	0	1	0	0	0	1	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	1	1	2	1	1	2	1	1	2	1
Crèche	1	2	1	2	2	1	2	2	1	2
Nursery school	0	1	1	1	1	1	1	1	1	1
Primary school	0	0	0	0	0	0	1	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	1	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental capital expenditure on water (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	23 899	26 153	25 787	25 726	25 820	25 937	26 105	26 059	25 655	25 780
Residential	23 239	25 018	24 631	24 611	25 018	24 428	25 262	24 611	24 479	25 018
Low density	7 990	9 210	9 210	8 803	9 210	8 417	9 210	8 803	9 210	9 210
Medium density	7 990	8 011	8 011	8 011	8 011	8 600	8 255	8 011	8 011	8 011
High density	7 258	7 797	7 411	7 797	7 797	7 411	7 797	7 797	7 258	7 797
Business	102	475	163	455	142	475	163	455	496	122
Retail/Office	102	475	142	455	122	475	142	455	475	122
Market/trading area	0	0	20	0	20	0	20	0	20	0
Industrial	376	396	729	396	376	729	396	729	396	376
Light industrial	43	63	63	63	43	63	63	63	63	43
Heavy industrial	333	333	666	333	333	666	333	666	333	333
Public spaces	142	163	163	142	163	163	142	163	163	142
Parks: public	61	61	61	61	61	61	61	61	61	61
Sports fields	81	102	102	81	102	102	81	102	102	81
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	20	20	41	20	41	41	20	20	41
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	20	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	20	20	20	20	20	0	20	20	20
Public parking areas	0	0	0	20	0	0	20	0	0	20
Taxi ranks	0	0	0	0	0	0	20	0	0	0
Public utilities	41	81	81	81	102	102	102	81	102	81
Post office	0	0	0	0	20	0	0	0	20	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	20	20	41	20	20	41	20	20	41	20
Crèche	20	41	20	41	41	20	41	41	20	41
Nursery school	0	20	20	20	20	20	20	20	20	20
Primary school	0	0	0	0	0	0	20	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	20	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental capital expenditure on sanitation (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	12 493	13 863	13 807	13 477	13 857	13 268	13 964	13 544	13 704	13 844
Residential	12 339	13 658	13 534	13 278	13 658	12 982	13 736	13 278	13 485	13 658
Low density	7 462	8 602	8 602	8 222	8 602	7 861	8 602	8 222	8 602	8 602
Medium density	2 556	2 562	2 562	2 562	2 562	2 751	2 640	2 562	2 562	2 562
High density	2 322	2 494	2 370	2 494	2 494	2 370	2 494	2 494	2 322	2 494
Business	33	52	52	46	46	52	52	46	59	39
Retail/Office	33	52	46	46	39	52	46	46	52	39
Market/trading area	0	0	7	0	7	0	7	0	7	0
Industrial	82	89	156	89	82	156	89	156	89	82
Light industrial	15	21	21	21	15	21	21	21	21	15
Heavy industrial	67	67	135	67	67	135	67	135	67	67
Public spaces	26	33	33	26	33	33	26	33	33	26
Parks: public	0	0	0	0	0	0	0	0	0	0
Sports fields	26	33	33	26	33	33	26	33	33	26
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	7	7	13	7	13	13	7	7	13
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	7	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	7	7	7	7	7	0	7	7	7
Public parking areas	0	0	0	7	0	0	7	0	0	7
Taxi ranks	0	0	0	0	0	0	7	0	0	0
Public utilities	13	26	26	26	33	33	48	26	33	26
Post office	0	0	0	0	7	0	0	0	7	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	7	7	13	7	7	13	7	7	13	7
Crèche	7	13	7	13	13	7	13	13	7	13
Nursery school	0	7	7	7	7	7	7	7	7	7
Primary school	0	0	0	0	0	0	22	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	7	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental capital expenditure on electricity (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	26 996	29 749	29 462	29 319	29 139	29 889	29 724	29 811	29 439	28 948
Residential	25 411	27 238	26 790	26 845	27 238	26 708	27 521	26 845	26 613	27 238
Low density	7 718	8 897	8 897	8 504	8 897	8 131	8 897	8 504	8 897	8 897
Medium density	9 271	9 294	9 294	9 294	9 294	9 979	9 578	9 294	9 294	9 294
High density	8 422	9 047	8 599	9 047	9 047	8 599	9 047	9 047	8 422	9 047
Business	400	1 069	614	1 039	460	1 069	614	1 039	1 100	430
Retail/Office	400	1 069	584	1 039	430	1 069	584	1 039	1 069	430
Market/trading area	0	0	30	0	30	0	30	0	30	0
Industrial	796	950	1 436	950	796	1 436	950	1 436	950	796
Light industrial	311	465	465	465	311	465	465	465	465	311
Heavy industrial	485	485	971	485	485	971	485	971	485	485
Public spaces	212	242	242	212	242	242	212	242	242	212
Parks: public	91	91	91	91	91	91	91	91	91	91
Sports fields	121	151	151	121	151	151	121	151	151	121
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	24	24	47	24	54	47	24	24	47
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	30	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	24	24	24	24	24	0	24	24	24
Public parking areas	0	0	0	24	0	0	24	0	0	24
Taxi ranks	0	0	0	0	0	0	24	0	0	0
Public utilities	178	225	356	225	379	379	379	225	510	225
Post office	0	0	0	0	154	0	0	0	154	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	154	154	309	154	154	309	154	154	309	154
Crèche	24	47	24	47	47	24	47	47	24	47
Nursery school	0	24	24	24	24	24	24	24	24	24
Primary school	0	0	0	0	0	0	154	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	24	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental capital expenditure on roads & stormwater (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	49 287	53 659	52 667	52 927	53 553	52 810	54 386	53 033	52 303	53 441
Residential	48 325	52 201	51 152	51 523	52 201	51 133	52 871	51 523	50 733	52 201
Low density	13 304	15 669	15 669	14 992	15 669	14 014	15 669	14 992	15 669	15 669
Medium density	18 147	18 189	18 189	18 189	18 189	19 824	18 860	18 189	18 189	18 189
High density	16 875	18 343	17 294	18 343	18 343	17 294	18 343	18 343	16 875	18 343
Business	280	498	447	442	391	498	447	442	553	335
Retail/Office	280	498	391	442	335	498	391	442	498	335
Market/trading area	0	0	56	0	56	0	56	0	56	0
Industrial	220	276	382	276	220	382	276	382	276	220
Light industrial	114	170	170	170	114	170	170	170	170	114
Heavy industrial	106	106	212	106	106	212	106	212	106	106
Public spaces	350	406	406	350	406	406	350	406	406	350
Parks: public	127	127	127	127	127	127	127	127	127	127
Sports fields	224	280	280	224	280	280	224	280	280	224
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	56	56	112	56	112	162	56	56	112
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	56	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	56	56	56	56	56	0	56	56	56
Public parking areas	0	0	0	56	0	0	56	0	0	56
Taxi ranks	0	0	0	0	0	0	106	0	0	0
Public utilities	112	224	224	224	280	280	280	224	280	224
Post office	0	0	0	0	56	0	0	0	56	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	56	56	112	56	56	112	56	56	112	56
Crèche	56	112	56	112	112	56	112	112	56	112
Nursery school	0	56	56	56	56	56	56	56	56	56
Primary school	0	0	0	0	0	0	56	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	56	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental capital expenditure on refuse removal (R'000)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	1 328	1 829	1 845	1 801	1 403	1 842	1 855	1 823	1 843	1 381
Residential	382	412	405	405	412	402	416	405	403	412
Low density	131	152	152	145	152	138	152	145	152	152
Medium density	131	132	132	132	132	141	136	132	132	132
High density	119	128	122	128	128	122	128	128	119	128
Business	109	175	175	153	153	175	175	153	197	131
Retail/Office	109	175	153	153	131	175	153	153	175	131
Market/trading area	0	0	22	0	22	0	22	0	22	0
Industrial	834	1 239	1 260	1 239	834	1 260	1 239	1 260	1 239	834
Light industrial	812	1 217	1 217	1 217	812	1 217	1 217	1 217	1 217	812
Heavy industrial	22	22	44	22	22	44	22	44	22	22
Public spaces	2	3	3	2	3	3	2	3	3	2
Parks: public	1	1	1	1	1	1	1	1	1	1
Sports fields	1	2	2	1	2	2	1	2	2	1
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	0	0	1	0	1	22	0	0	1
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	0	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	0	0	0	0	0	0	0	0	0
Public parking areas	0	0	0	0	0	0	0	0	0	0
Taxi ranks	0	0	0	0	0	0	22	0	0	0
Public utilities	1	1	1	1	2	2	2	1	2	1
Post office	0	0	0	0	0	0	0	0	0	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	0	0	1	0	0	1	0	0	1	0
Crèche	0	1	0	1	1	0	1	1	0	1
Nursery school	0	0	0	0	0	0	0	0	0	0
Primary school	0	0	0	0	0	0	0	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	0	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental operating cost for water (R'000 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	223.44	244.39	241.00	240.43	241.25	242.44	243.89	243.57	239.77	240.88
Residential	215.43	231.92	228.34	228.15	231.92	226.45	234.18	228.15	226.92	231.92
Low density	74.07	85.38	85.38	81.61	85.38	78.03	85.38	81.61	85.38	85.38
Medium density	74.07	74.26	74.26	74.26	74.26	79.72	76.52	74.26	74.26	74.26
High density	67.29	72.28	68.70	72.28	72.28	68.70	72.28	72.28	67.29	72.28
Business	0.94	4.45	1.51	4.27	1.32	4.45	1.51	4.27	4.64	1.13
Retail/Office	0.94	4.45	1.32	4.27	1.13	4.45	1.32	4.27	4.45	1.13
Market/trading area	0.00	0.00	0.19	0.00	0.19	0.00	0.19	0.00	0.19	0.00
Industrial	5.38	5.57	8.70	5.57	5.38	8.70	5.57	8.70	5.57	5.38
Light industrial	2.24	2.43	2.43	2.43	2.24	2.43	2.43	2.43	2.43	2.24
Heavy industrial	3.14	3.14	6.27	3.14	3.14	6.27	3.14	6.27	3.14	3.14
Public spaces	1.32	1.51	1.51	1.32	1.51	1.51	1.32	1.51	1.51	1.32
Parks: public	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57
Sports fields	0.75	0.94	0.94	0.75	0.94	0.94	0.75	0.94	0.94	0.75
Stadiums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civic facilities	0.00	0.19	0.19	0.38	0.19	0.38	0.38	0.19	0.19	0.38
Community centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community hall	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
Libraries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clinics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fire station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ambulance station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cemeteries	0.00	0.19	0.19	0.19	0.19	0.19	0.00	0.19	0.19	0.19
Public parking areas	0.00	0.00	0.00	0.19	0.00	0.00	0.19	0.00	0.00	0.19
Taxi ranks	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00
Public utilities	0.38	0.75	0.75	0.75	0.94	0.94	0.94	0.75	0.94	0.75
Post office	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.19	0.00
Police station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Day hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Old age home	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Children's homes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Place of worship	0.19	0.19	0.38	0.19	0.19	0.38	0.19	0.19	0.38	0.19
Crèche	0.19	0.38	0.19	0.38	0.38	0.19	0.38	0.38	0.19	0.38
Nursery school	0.00	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Primary school	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00
Secondary school	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
After school centre	0.00	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00
Technical college	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Incremental operating cost for sanitation (R'000 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	261.87	288.09	286.81	281.11	287.93	278.57	290.88	282.93	284.10	287.60
Residential	256.07	280.99	277.89	274.18	280.99	269.33	282.95	274.18	276.67	280.99
Low density	133.88	154.32	154.32	147.51	154.32	141.04	154.32	147.51	154.32	154.32
Medium density	64.03	64.19	64.19	64.19	64.19	68.91	66.14	64.19	64.19	64.19
High density	58.16	62.48	59.38	62.48	62.48	59.38	62.48	62.48	58.16	62.48
Business	0.81	1.30	1.30	1.14	1.14	1.30	1.30	1.14	1.47	0.98
Retail/Office	0.81	1.30	1.14	1.14	0.98	1.30	1.14	1.14	1.30	0.98
Market/trading area	0.00	0.00	0.16	0.00	0.16	0.00	0.16	0.00	0.16	0.00
Industrial	4.01	4.17	5.98	4.17	4.01	5.98	4.17	5.98	4.17	4.01
Light industrial	2.19	2.35	2.35	2.35	2.19	2.35	2.35	2.35	2.35	2.19
Heavy industrial	1.81	1.81	3.63	1.81	1.81	3.63	1.81	3.63	1.81	1.81
Public spaces	0.65	0.81	0.81	0.65	0.81	0.81	0.65	0.81	0.81	0.65
Parks: public	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sports fields	0.65	0.81	0.81	0.65	0.81	0.81	0.65	0.81	0.81	0.65
Stadiums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civic facilities	0.00	0.16	0.16	0.33	0.16	0.33	0.33	0.16	0.16	0.33
Community centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community hall	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
Libraries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clinics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fire station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ambulance station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cemeteries	0.00	0.16	0.16	0.16	0.16	0.16	0.00	0.16	0.16	0.16
Public parking areas	0.00	0.00	0.00	0.16	0.00	0.00	0.16	0.00	0.00	0.16
Taxi ranks	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00
Public utilities	0.33	0.65	0.65	0.65	0.81	0.81	1.48	0.65	0.81	0.65
Post office	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.16	0.00
Police station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Day hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Old age home	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Children's homes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Place of worship	0.16	0.16	0.33	0.16	0.16	0.33	0.16	0.16	0.33	0.16
Crèche	0.16	0.33	0.16	0.33	0.33	0.16	0.33	0.33	0.16	0.33
Nursery school	0.00	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Primary school	0.00	0.00	0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.00
Secondary school	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
After school centre	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00	0.00	0.00
Technical college	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Incremental operating cost for electricity (R'000 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	857.51	955.92	948.61	941.26	928.20	966.04	948.15	964.23	949.20	921.24
Residential	793.87	853.88	840.51	840.32	853.88	834.48	862.32	840.32	835.24	853.88
Low density	266.38	307.05	307.05	293.49	307.05	280.61	307.05	293.49	307.05	307.05
Medium density	276.40	277.11	277.11	277.11	277.11	297.50	285.55	277.11	277.11	277.11
High density	251.08	269.72	256.36	269.72	269.72	256.36	269.72	269.72	251.08	269.72
Business	14.42	43.95	22.08	43.05	16.23	43.95	22.08	43.05	44.85	15.32
Retail/Office	14.42	43.95	21.18	43.05	15.32	43.95	21.18	43.05	43.95	15.32
Market/trading area	0.00	0.00	0.90	0.00	0.90	0.00	0.90	0.00	0.90	0.00
Industrial	36.35	42.21	64.97	42.21	36.35	64.97	42.21	64.97	42.21	36.35
Light industrial	13.58	19.44	19.44	19.44	13.58	19.44	19.44	19.44	19.44	13.58
Heavy industrial	22.77	22.77	45.53	22.77	22.77	45.53	22.77	45.53	22.77	22.77
Public spaces	6.31	7.21	7.21	6.31	7.21	7.21	6.31	7.21	7.21	6.31
Parks: public	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71
Sports fields	3.61	4.51	4.51	3.61	4.51	4.51	3.61	4.51	4.51	3.61
Stadiums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civic facilities	0.00	0.70	0.70	1.41	0.70	1.60	1.41	0.70	0.70	1.41
Community centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community hall	0.00	0.00	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.00
Libraries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clinics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fire station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ambulance station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cemeteries	0.00	0.70	0.70	0.70	0.70	0.70	0.00	0.70	0.70	0.70
Public parking areas	0.00	0.00	0.00	0.70	0.00	0.00	0.70	0.00	0.00	0.70
Taxi ranks	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00
Public utilities	6.56	7.97	13.12	7.97	13.83	13.83	13.83	7.97	18.98	7.97
Post office	0.00	0.00	0.00	0.00	5.86	0.00	0.00	0.00	5.86	0.00
Police station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Day hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Old age home	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Children's homes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Place of worship	5.86	5.86	11.72	5.86	5.86	11.72	5.86	5.86	11.72	5.86
Crèche	0.70	1.41	0.70	1.41	1.41	0.70	1.41	1.41	0.70	1.41
Nursery school	0.00	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Primary school	0.00	0.00	0.00	0.00	0.00	0.00	5.86	0.00	0.00	0.00
Secondary school	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
After school centre	0.00	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00
Technical college	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Incremental operating cost for roads & stormwater (R'000 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	240.35	261.40	256.67	257.80	260.91	257.22	264.86	258.28	254.94	260.38
Residential	233.93	252.62	247.63	249.28	252.62	247.42	255.82	249.28	245.63	252.62
Low density	65.62	77.12	77.12	73.78	77.12	69.13	77.12	73.78	77.12	77.12
Medium density	87.26	87.47	87.47	87.47	87.47	95.25	90.66	87.47	87.47	87.47
High density	81.04	88.03	83.04	88.03	88.03	83.04	88.03	88.03	81.04	88.03
Business	1.33	2.35	2.13	2.09	1.86	2.35	2.13	2.09	2.62	1.60
Retail/Office	1.33	2.35	1.86	2.09	1.60	2.35	1.86	2.09	2.35	1.60
Market/trading area	0.00	0.00	0.27	0.00	0.27	0.00	0.27	0.00	0.27	0.00
Industrial	2.89	3.15	3.64	3.15	2.89	3.64	3.15	3.64	3.15	2.89
Light industrial	2.40	2.66	2.66	2.66	2.40	2.66	2.66	2.66	2.66	2.40
Heavy industrial	0.49	0.49	0.98	0.49	0.49	0.98	0.49	0.98	0.49	0.49
Public spaces	1.68	1.94	1.94	1.68	1.94	1.94	1.68	1.94	1.94	1.68
Parks: public	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
Sports fields	1.06	1.33	1.33	1.06	1.33	1.33	1.06	1.33	1.33	1.06
Stadiums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civic facilities	0.00	0.27	0.27	0.53	0.27	0.53	0.75	0.27	0.27	0.53
Community centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community hall	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
Libraries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clinics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fire station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ambulance station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cemeteries	0.00	0.27	0.27	0.27	0.27	0.27	0.00	0.27	0.27	0.27
Public parking areas	0.00	0.00	0.00	0.27	0.00	0.00	0.27	0.00	0.00	0.27
Taxi ranks	0.00	0.00	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00
Public utilities	0.53	1.06	1.06	1.06	1.33	1.33	1.33	1.06	1.33	1.06
Post office	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.27	0.00
Police station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Day hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Old age home	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Children's homes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Place of worship	0.27	0.27	0.53	0.27	0.27	0.53	0.27	0.27	0.53	0.27
Crèche	0.27	0.53	0.27	0.53	0.53	0.27	0.53	0.53	0.27	0.53
Nursery school	0.00	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
Primary school	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00
Secondary school	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
After school centre	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00	0.00	0.00
Technical college	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Incremental operating cost for refuse removal (R'000 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total R'000	125.75	172.55	174.00	169.88	132.72	173.75	174.97	171.93	173.79	130.65
Residential	35.71	38.44	37.85	37.82	38.44	37.53	38.82	37.82	37.61	38.44
Low density	12.28	14.15	14.15	13.53	14.15	12.93	14.15	13.53	14.15	14.15
Medium density	12.28	12.31	12.31	12.31	12.31	13.21	12.68	12.31	12.31	12.31
High density	11.15	11.98	11.39	11.98	11.98	11.39	11.98	11.98	11.15	11.98
Business	10.21	16.33	16.33	14.29	14.29	16.33	16.33	14.29	18.37	12.25
Retail/Office	10.21	16.33	14.29	14.29	12.25	16.33	14.29	14.29	16.33	12.25
Market/trading area	0.00	0.00	2.04	0.00	2.04	0.00	2.04	0.00	2.04	0.00
Industrial	79.55	117.37	119.41	117.37	79.55	119.41	117.37	119.41	117.37	79.55
Light industrial	77.51	115.33	115.33	115.33	77.51	115.33	115.33	115.33	115.33	77.51
Heavy industrial	2.04	2.04	4.08	2.04	2.04	4.08	2.04	4.08	2.04	2.04
Public spaces	0.22	0.25	0.25	0.22	0.25	0.25	0.22	0.25	0.25	0.22
Parks: public	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Sports fields	0.12	0.16	0.16	0.12	0.16	0.16	0.12	0.16	0.16	0.12
Stadiums	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Civic facilities	0.00	0.03	0.03	0.06	0.03	0.06	2.07	0.03	0.03	0.06
Community centre	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Community hall	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Libraries	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Clinics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fire station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ambulance station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cemeteries	0.00	0.03	0.03	0.03	0.03	0.03	0.00	0.03	0.03	0.03
Public parking areas	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.03
Taxi ranks	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.00	0.00	0.00
Public utilities	0.06	0.12	0.12	0.12	0.16	0.16	0.16	0.12	0.16	0.12
Post office	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.03	0.00
Police station	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Day hospital	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospice	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Old age home	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Children's homes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Place of worship	0.03	0.03	0.06	0.03	0.03	0.06	0.03	0.03	0.06	0.03
Crèche	0.03	0.06	0.03	0.06	0.06	0.03	0.06	0.06	0.03	0.06
Nursery school	0.00	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Primary school	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
Secondary school	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
After school centre	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Technical college	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Incremental water use (kl per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total kl/month	21 700	24 443	24 262	23 568	23 763	24 720	24 018	24 553	24 132	23 158
Residential	17 972	18 940	18 694	18 700	18 940	18 672	19 120	18 700	18 544	18 940
Low density	4 250	4 810	4 810	4 570	4 810	4 500	4 810	4 570	4 810	4 810
Medium density	4 908	4 920	4 920	4 920	4 920	5 208	5 100	4 920	4 920	4 920
High density	8 814	9 210	8 964	9 210	9 210	8 964	9 210	9 210	8 814	9 210
Business	950	1 850	1 450	1 700	1 200	1 850	1 450	1 700	1 950	1 100
Retail/Office	950	1 850	1 350	1 700	1 100	1 850	1 350	1 700	1 850	1 100
Market/trading area	0	0	100	0	100	0	100	0	100	0
Industrial	602	652	1 152	652	602	1 152	652	1 152	652	602
Light industrial	102	152	152	152	102	152	152	152	152	102
Heavy industrial	500	500	1 000	500	500	1 000	500	1 000	500	500
Public spaces	2 061	2 561	2 561	2 061	2 561	2 561	2 061	2 561	2 561	2 061
Parks: public	61	61	61	61	61	61	61	61	61	61
Sports fields	2 000	2 500	2 500	2 000	2 500	2 500	2 000	2 500	2 500	2 000
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	200	200	215	200	250	95	200	200	215
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	50	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	200	200	200	200	200	0	200	200	200
Public parking areas	0	0	0	15	0	0	15	0	0	15
Taxi ranks	0	0	0	0	0	0	80	0	0	0
Public utilities	115	240	205	240	260	235	640	240	225	240
Post office	0	0	0	0	20	0	0	0	20	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	40	40	80	40	40	80	40	40	80	40
Crèche	75	150	75	150	150	75	150	150	75	150
Nursery school	0	50	50	50	50	50	50	50	50	50
Primary school	0	0	0	0	0	0	400	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	30	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental waste water generate (kl per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total kl / month	16 459	18 699	18 562	17 955	18 196	18 861	18 403	18 717	18 466	17 681
Residential	13 365	14 171	13 979	13 967	14 171	13 945	14 315	13 967	13 866	14 171
Low density	3 613	4 105	4 105	3 901	4 105	3 825	4 105	3 901	4 105	4 105
Medium density	3 774	3 783	3 783	3 783	3 783	4 029	3 927	3 783	3 783	3 783
High density	5 979	6 284	6 091	6 284	6 284	6 091	6 284	6 284	5 979	6 284
Business	808	1 498	1 233	1 370	1 020	1 498	1 233	1 370	1 583	935
Retail/Office	808	1 498	1 148	1 370	935	1 498	1 148	1 370	1 498	935
Market/trading area	0	0	85	0	85	0	85	0	85	0
Industrial	437	479	829	479	437	829	479	829	479	437
Light industrial	87	129	129	129	87	129	129	129	129	87
Heavy industrial	350	350	700	350	350	700	350	700	350	350
Public spaces	1 752	2 177	2 177	1 752	2 177	2 177	1 752	2 177	2 177	1 752
Parks: public	52	52	52	52	52	52	52	52	52	52
Sports fields	1 700	2 125	2 125	1 700	2 125	2 125	1 700	2 125	2 125	1 700
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	170	170	183	170	213	81	170	170	183
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	43	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	170	170	170	170	170	0	170	170	170
Public parking areas	0	0	0	13	0	0	13	0	0	13
Taxi ranks	0	0	0	0	0	0	68	0	0	0
Public utilities	98	204	174	204	221	200	544	204	191	204
Post office	0	0	0	0	17	0	0	0	17	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	34	34	68	34	34	68	34	34	68	34
Crèche	64	128	64	128	128	64	128	128	64	128
Nursery school	0	43	43	43	43	43	43	43	43	43
Primary school	0	0	0	0	0	0	340	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	26	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental electricity demand (kWh per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total kWh per month	166 881	202 135	193 212	195 492	191 395	212 744	205 784	196 477	191 804	191 067
Residential	130 376	149 287	140 200	147 643	149 287	158 762	153 314	147 643	138 627	149 287
Low density	14 116	22 340	22 340	20 695	22 340	15 765	22 340	20 695	22 340	22 340
Medium density	61 150	61 178	61 178	61 178	61 178	86 314	65 204	61 178	61 178	61 178
High density	55 110	65 770	56 683	65 770	65 770	56 683	65 770	65 770	55 110	65 770
Business	35 000	50 987	50 164	45 987	40 164	50 987	50 164	45 987	51 151	40 000
Retail/Office	35 000	50 987	50 000	45 987	40 000	50 987	50 000	45 987	50 987	40 000
Market/trading area	0	0	164	0	164	0	164	0	164	0
Industrial	1 153	1 235	2 222	1 235	1 153	2 222	1 235	2 222	1 235	1 153
Light industrial	166	249	249	249	166	249	249	249	249	166
Heavy industrial	987	987	1 974	987	987	1 974	987	1 974	987	987
Public spaces	155	181	181	155	181	181	155	181	181	155
Parks: public	49	49	49	49	49	49	49	49	49	49
Sports fields	105	132	132	105	132	132	105	132	132	105
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	49	49	77	49	132	192	49	49	77
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	82	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	49	49	49	49	49	0	49	49	49
Public parking areas	0	0	0	28	0	0	28	0	0	28
Taxi ranks	0	0	0	0	0	0	164	0	0	0
Public utilities	197	395	395	395	559	461	724	395	559	395
Post office	0	0	0	0	164	0	0	0	164	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	99	99	197	99	99	197	99	99	197	99
Crèche	99	197	99	197	197	99	197	197	99	197
Nursery school	0	99	99	99	99	99	99	99	99	99
Primary school	0	0	0	0	0	0	329	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	66	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental road and stormwater required (m per annum)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total m/annum	13 180	14 290	14 066	14 061	14 272	14 024	14 452	14 079	13 985	14 247
Residential	12 964	13 969	13 733	13 753	13 969	13 660	14 119	13 753	13 639	13 969
Low density	4 254	4 918	4 918	4 702	4 918	4 482	4 918	4 702	4 918	4 918
Medium density	4 544	4 555	4 555	4 555	4 555	4 919	4 705	4 555	4 555	4 555
High density	4 166	4 496	4 259	4 496	4 496	4 259	4 496	4 496	4 166	4 496
Business	63	105	100	93	88	105	100	93	118	75
Retail/Office	63	105	88	93	75	105	88	93	105	75
Market/trading area	0	0	13	0	13	0	13	0	13	0
Industrial	45	57	75	57	45	75	57	75	57	45
Light industrial	27	39	39	39	27	39	39	39	39	27
Heavy industrial	18	18	35	18	18	35	18	35	18	18
Public spaces	84	96	96	84	96	96	84	96	96	84
Parks: public	34	34	34	34	34	34	34	34	34	34
Sports fields	50	63	63	50	63	63	50	63	63	50
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	13	13	25	13	25	30	13	13	25
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	13	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	13	13	13	13	13	0	13	13	13
Public parking areas	0	0	0	13	0	0	13	0	0	13
Taxi ranks	0	0	0	0	0	0	18	0	0	0
Public utilities	25	50	50	50	63	63	63	50	63	50
Post office	0	0	0	0	13	0	0	0	13	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	13	13	25	13	13	25	13	13	25	13
Crèche	13	25	13	25	25	13	25	25	13	25
Nursery school	0	13	13	13	13	13	13	13	13	13
Primary school	0	0	0	0	0	0	13	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	13	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental refuse generated (tons per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total tons	439	1 533	636	1 484	528	1 574	635	1 513	1 556	503
Residential	96	102	100	101	102	100	103	101	99	102
Low density	19	22	22	21	22	20	22	21	22	22
Medium density	33	33	33	33	33	35	34	33	33	33
High density	44	47	45	47	47	45	47	47	44	47
Business	276	1 339	413	1 291	346	1 339	413	1 291	1 361	324
Retail/Office	276	1 339	391	1 291	324	1 339	391	1 291	1 339	324
Market/trading area	0	0	23	0	23	0	23	0	23	0
Industrial	60	74	103	74	60	103	74	103	74	60
Light industrial	31	45	45	45	31	45	45	45	45	31
Heavy industrial	29	29	58	29	29	58	29	58	29	29
Public spaces	0	0	0	0	0	0	0	0	0	0
Parks: public	0	0	0	0	0	0	0	0	0	0
Sports fields	0	0	0	0	0	0	0	0	0	0
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	1	1	1	1	8	9	1	1	1
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	7	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	1	1	1	1	1	0	1	1	1
Public parking areas	0	0	0	0	0	0	0	0	0	0
Taxi ranks	0	0	0	0	0	0	9	0	0	0
Public utilities	7	17	19	17	19	24	36	17	21	17
Post office	0	0	0	0	2	0	0	0	2	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	5	5	10	5	5	10	5	5	10	5
Crèche	2	5	2	5	5	2	5	5	2	5
Nursery school	0	7	7	7	7	7	7	7	7	7
Primary school	0	0	0	0	0	0	19	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	5	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

■ Incremental refuse generated (m3 per month)

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total population	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663	4 663
Total m3	881	3 073	1 276	2 976	1 063	3 152	1 278	3 034	3 116	1 014
Residential	192	204	200	202	204	200	206	202	198	204
Low density	39	44	44	42	44	41	44	42	44	44
Medium density	65	65	65	65	65	70	67	65	65	65
High density	88	94	90	94	94	90	94	94	88	94
Business	552	2 677	826	2 583	692	2 677	826	2 583	2 723	647
Retail/Office	552	2 677	781	2 583	647	2 677	781	2 583	2 677	647
Market/trading area	0	0	45	0	45	0	45	0	45	0
Industrial	117	146	204	146	117	204	146	204	146	117
Light industrial	60	89	89	89	60	89	89	89	89	60
Heavy industrial	58	58	116	58	58	116	58	116	58	58
Public spaces	0	0	0	0	0	0	0	0	0	0
Parks: public	0	0	0	0	0	0	0	0	0	0
Sports fields	0	0	0	0	0	0	0	0	0	0
Stadiums	0	0	0	0	0	0	0	0	0	0
Civic facilities	0	2	2	2	2	17	18	2	2	2
Community centre	0	0	0	0	0	0	0	0	0	0
Community hall	0	0	0	0	0	14	0	0	0	0
Libraries	0	0	0	0	0	0	0	0	0	0
Clinics	0	0	0	0	0	0	0	0	0	0
Fire station	0	0	0	0	0	0	0	0	0	0
Ambulance station	0	0	0	0	0	0	0	0	0	0
Cemeteries	0	2	2	2	2	2	0	2	2	2
Public parking areas	0	0	0	0	0	0	0	0	0	0
Taxi ranks	0	0	0	0	0	0	18	0	0	0
Public utilities	19	43	43	43	47	53	82	43	47	43
Post office	0	0	0	0	4	0	0	0	4	0
Police station	0	0	0	0	0	0	0	0	0	0
Hospital	0	0	0	0	0	0	0	0	0	0
Day hospital	0	0	0	0	0	0	0	0	0	0
Hospice	0	0	0	0	0	0	0	0	0	0
Old age home	0	0	0	0	0	0	0	0	0	0
Children's homes	0	0	0	0	0	0	0	0	0	0
Place of worship	10	10	19	10	10	19	10	10	19	10
Crèche	10	19	10	19	19	10	19	19	10	19
Nursery school	0	14	14	14	14	14	14	14	14	14
Primary school	0	0	0	0	0	0	39	0	0	0
Secondary school	0	0	0	0	0	0	0	0	0	0
After school centre	0	0	0	0	0	10	0	0	0	0
Technical college	0	0	0	0	0	0	0	0	0	0

13.4 Annexure 4: Prioritisation Model

Annexure 4: Prioritisation Model

The capital prioritisation model criteria will be discussed in more detail under the five (5) themes of the model, namely:

- Strategic alignment;
- Spatial alignment;
- Financial alignment;
- Economic alignment;
- Social alignment; and
- Technical alignment.

13.4.1 Strategic Alignment

The strategic alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the organisations developmental objectives as well as strategic outcomes set out in the strategic guiding document of the municipality. The policy alignment score is calculated within five distinct categories³⁹, namely:

- IDP Outcome 1: Valley of Possibility;
- IDP Outcome 2: Dignified Living;
- IDP Outcome 3: Good Governance and Compliance;
- IDP Outcome 4: Green and Sustainable Valley; and
- IDP Outcome 5: Safe Valley.

³⁹ These categories are aligned with the IDP Outcomes.

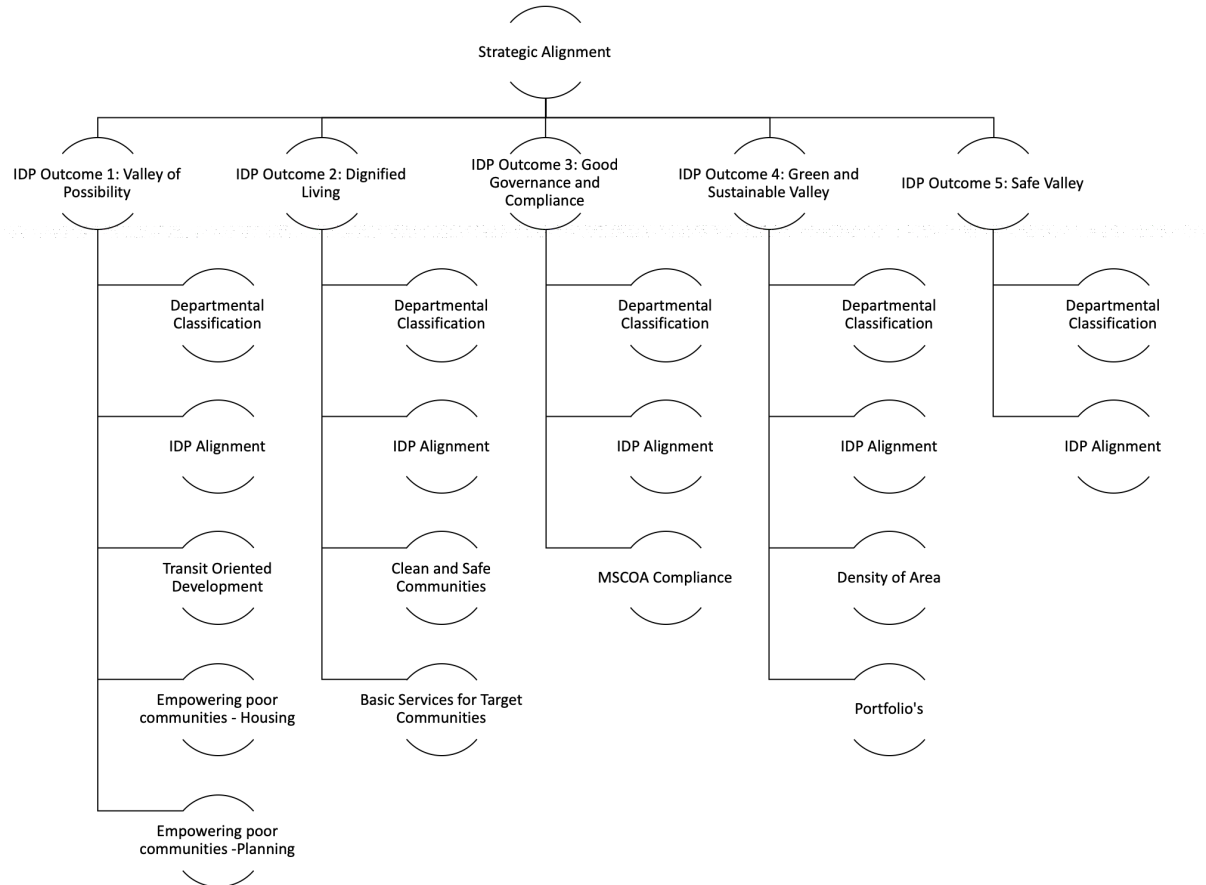


Figure 118: Capital Prioritisation Model: Strategic Alignment

13.4.1.1 IDP Outcome 1: Valley of Possibility

Table 102: Scoring Criteria - Departmental Classification

Category	Description
Definition	Specific departments' mandate is to deliver specific services. Those services correlates with the definition of this IDP outcome.
Branch Weight	20
Input Variable	The department by which the project is owned.
Process	=if(x in ("Community and Protection Services","Infrastructure Services","Planning and Economic Development"),100,0)
Mathematical Operator	Value achieved by the project is passed through to the parent scoring branch.

Table 103: IDP Alignment

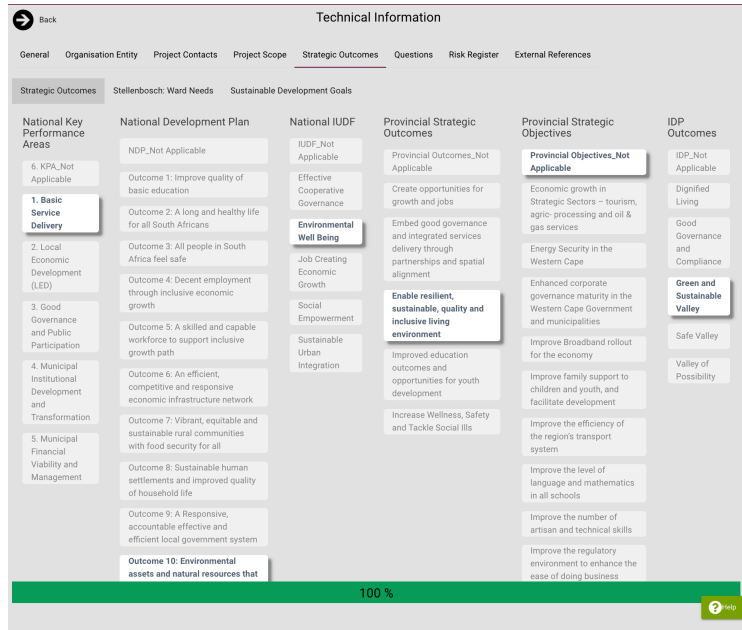
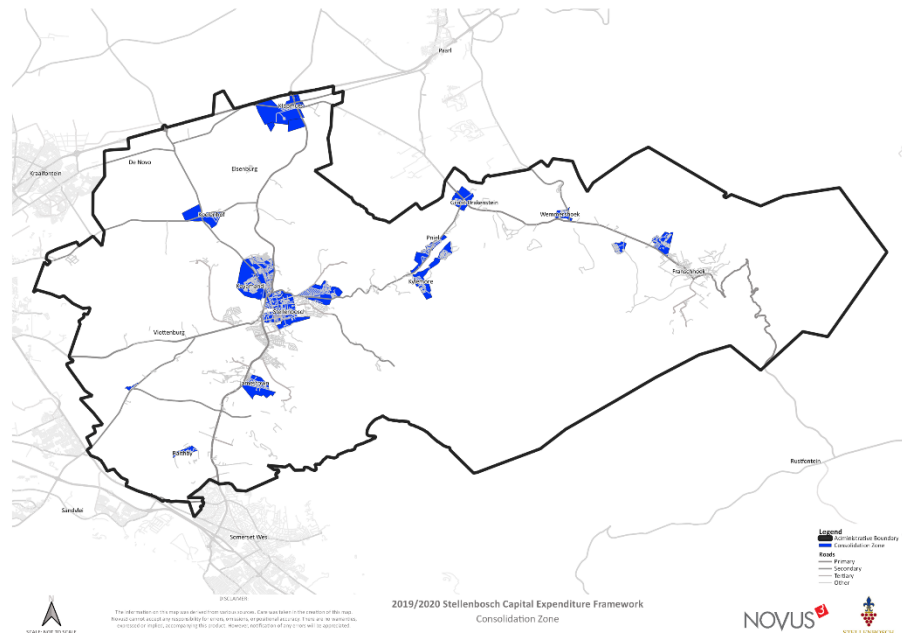
Category	Description
Definition	IDP alignment measures the alignment of a project with respect to the different IDP outcomes.
Branch Weight	10
Input Variable	
Process	If a project aligns in terms of this specific IDP outcome, it scores 100% on this branch, if not, it scores 0 on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 104: Scoring Criteria - Transit Oriented Development

Category	Description
Definition	Transit Oriented Development (TOD) aims to identify a hierarchy of Investment priority areas towards deification and mixed-use investments.
Branch Weight	<p>The different TOD zones have been weighted differently, as they contribute differently to the priority of the municipality:</p> <p>TOD Consent ration Zones: 100%</p> <p>TOD Promotion Zones: 75%</p>

Category	Description
	TOD Supportive Zones: 50%

Input Variable

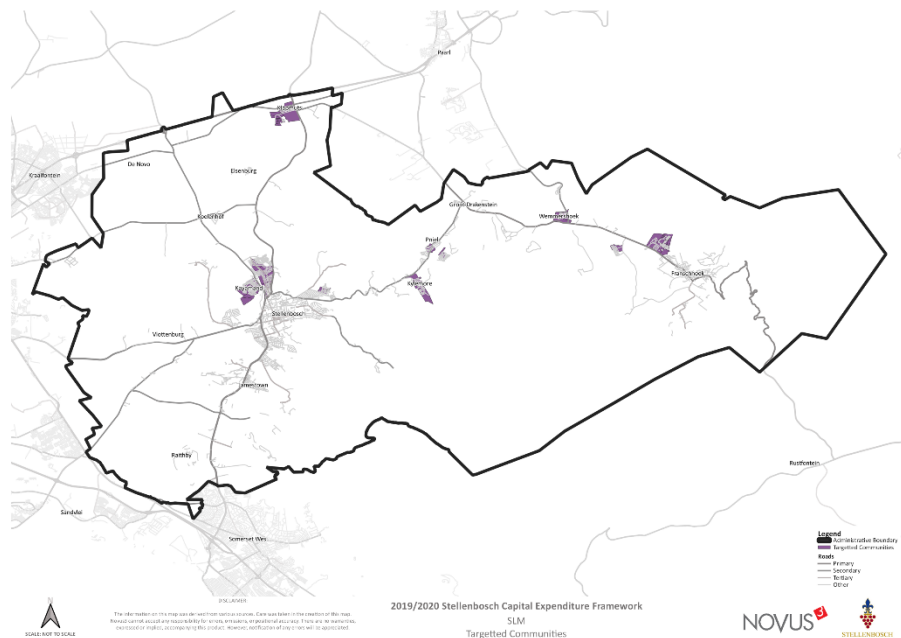


Process	If the spatial intersect returns a result where a project intersect with the TOD zone, the maximum possible score is returned and passed through to the parent branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 105: Scoring Criteria - Empowering Poor Communities - Housing

Category	Description
Definition	The provision of quality housing across a range of housing typologies and tenure options is a key focus for the municipality. Therefore, given the focus on providing housing stock, the relevant departments are given additional priority based on the fact that they are responsible for meeting the housing stock mandate of the municipality.
Branch Weight	40
Input Variable	<p>The following departments are pre-filtered during this scoring test, so that only the relevant projects are elevated:</p> <p>IHS: New Housing</p>

Category	Description
	IHS: Informal Settlement
	Community Services: Library Service
	Sports Grounds and Picnic Sites
	Land Use Management
	Community Development
	Economic Development and Tourism
	Environmental Management: Urban Greening
	A further spatial test is conducted, to see if the said departments' projects are within targeted communities.



Process	All housing and human settlements project receive additional score based on their alignment with the municipality's mandate of housing stock provision.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Category	Description
----------	-------------

[illegible]

13.4.1.2 IDP Outcome 2: Dignified Living

Table 107: Scoring Criteria - Departmental Classification

Category	Description
Definition	Specific departments' mandate is to deliver specific services. Those services correlate with the definition of this IDP outcome.
Branch Weight	20
Input Variable	The department by which the project is owned.
Process	=if (x in ("Infrastructure Services","Community and Protection Services"),100,0)
Mathematical Operator	Value achieved by the project is passed through to the parent scoring branch.

Table 108: Scoring Criteria - IDP Alignment

Category	Description
Definition	IDP alignment measures the alignment of a project with respect to the different IDP outcomes.
Branch Weight	10

Input Variable

Technical Information					
General	Organisation Entity	Project Contacts	Project Scope	Strategic Outcomes	Questions
Strategic Outcomes					
Stellenbosch: Ward Needs					
Sustainable Development Goals					
National Key Performance Areas	National Development Plan	National IUDF	Provincial Strategic Outcomes	Provincial Strategic Objectives	IDP Outcomes
6. KPA: Not Applicable	NDP: Not Applicable	IUDF: Not Applicable	Provincial Outcomes: Not Applicable	Provincial Objectives: Not Applicable	IDP: Not Applicable
1. Basic Service Delivery	Outcome 1: Improve quality of basic education	Effective Cooperative Governance	Create opportunities for growth and jobs	Economic growth in Strategic Sectors – tourism, agro-processing and oil & gas services	Dignified Living
2. Local Economic Development (LED)	Outcome 2: A long and healthy life for all South Africans	Environmental Well Being	Embed good governance and integrated services delivery through partnerships and spatial alignment	Energy Security in the Western Cape	Good Governance and Compliance
3. Good Governance and Public Participation	Outcome 3: All people in South Africa feel safe	Job Creating Economic Growth	Enable resilient, sustainable, quality and inclusive living environment	Enhanced corporate governance maturity in the Western Cape Government and municipalities	Green and Sustainable Valley
4. Municipal Institutional Development and Transformation	Outcome 4: Decent employment through inclusive economic growth	Social Empowerment	Improved education outcomes and opportunities for youth development	Improve Broadband rollout for the economy	Safe Valley
5. Municipal Financial Viability and Management	Outcome 5: A skilled and capable workforce to support inclusive growth path	Sustainable Urban Integration	Increase Wellness, Safety and Tackle Social Ills	Improve family support to children and youth and facilitate development	Valley of Possibility
	Outcome 6: An efficient, competitive and responsive economic infrastructure network			Improve the efficiency of the region's transport system	
	Outcome 7: Vibrant, equitable and sustainable rural communities with food security for all			Improve the level of language and mathematics in all schools	
	Outcome 8: Sustainable human settlements and improved quality of household life			Improve the number of artisan and technical skills	
	Outcome 9: A Responsive, accountable effective and efficient local government system			Improve the regulatory environment to enhance the ease of doing business	
	Outcome 10: Environmental assets and natural resources that				
100 %					

Category	Description
Process	If a project aligns in terms of this specific IDP outcome, it scores 100% on this branch, if not, it scores 0 on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

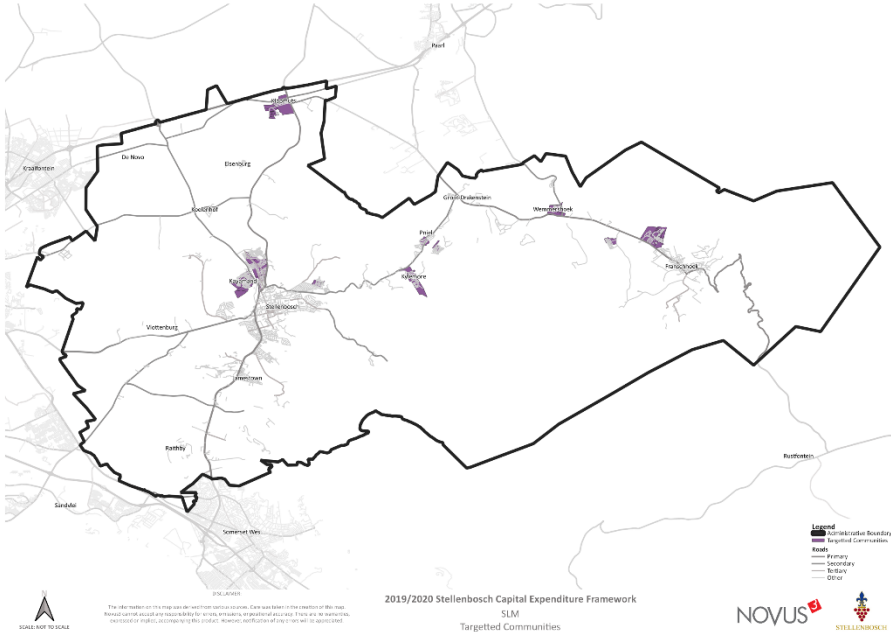
Table 109: Scoring Criteria - Clean and safe target communities

Category	Description
Definition	A component of being able to live in a dignified manner, is providing one of man's most basic need – safety. By prioritising specific departments responsible for safety and cleanliness, within specific areas, a clean and safe community will be achieved.
Branch Weight	50
Input Variable	<p>The following departments, with projects within the area depicted below are eligible to score on this branch:</p> <p>Traffic Engineering</p> <p>Waste Management: Solid Waste Management</p> <p>Parks, Rivers and Area Cleaning</p> <p>Fire and Rescue Services</p> <p>Law Enforcement and Security</p>

Category	Description
	<p>The map displays the 2019/2020 Stellenbosch Capital Expenditure Framework for Targeted Communities. It shows the municipal boundary of Stellenbosch and various communities within it. Purple shaded areas indicate the targeted communities. The map includes a legend for administrative boundaries, roads, and a scale bar.</p>
Process	The following departments receive additional score based on their mandate and their works location.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 110: Scoring Criteria - Basic Services for target communities

Category	Description
Definition	Basic service delivery is one of the most important targets of the municipality, as well as national government.
Branch Weight	50
Input Variable	<p>The following units enjoys the opportunity to score on this branch:</p> <p>Infrastructure Services</p> <p>Planning and Economic Development</p> <p>The said units' projects must be within these areas:</p>

Category	Description
	
Process	Projects that are related to the units infrastructure Services and Planning and Economic Development, within specific communities are eligible to score.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.1.3 IDP Outcome 3: Good Governance and Compliance

Table 111: Scoring Criteria - Departmental Classification

Category	Description
Definition	Specific departments' mandate is to deliver specific services. Those services correlates with the definition of this IDP outcome.
Branch Weight	60
Input Variable	The department by which the project is owned.
Process	=if(x in ("Corporate Services","Municipal Manager","Financial Services"),100,0)
Mathematical Operator	Value achieved by the project is passed through to the parent scoring branch.

Table 112: Scoring Criteria - IDP Alignment

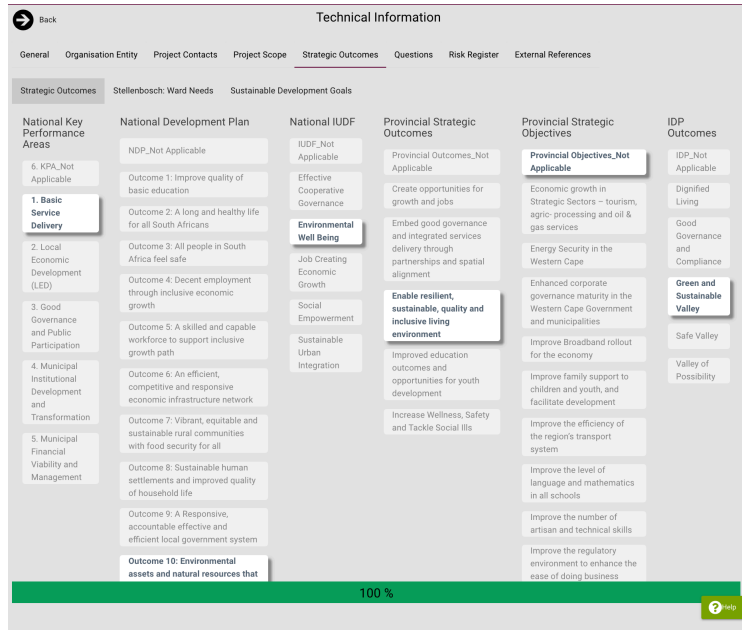
Category	Description
Definition	IDP alignment measures the alignment of a project with respect to the different IDP outcomes.
Branch Weight	10
Input Variable	
Process	If a project aligns in terms of this specific IDP outcome, it scores 100% on this branch, if not, it scores 0 on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 113: Scoring Criteria - MSCOA Compliance

Category	Description
Definition	mSCOA is an institutional arrangement set out by national Treasury intended for amongst other to instil good governance practices within the municipality. It represents a business process focus, that standardises all municipal accounting practices and reporting across the country. In order to be mSCOA compliant, a project must contain several segments of information.
Branch Weight	60

Category	Description
Input Variable	Functional Segment (20) Item Segment (20) Project Segment (20) Regional Segment (20) Cost Segment (20)
Process	If a project contains the lowest level GUID information on the following segments, it will be eligible to score.
Mathematical Operator	The sum of all the values achieved by the project is passed through to the parent scoring branch.

13.4.1.4 IDP Outcome 4: Green and Sustainable Valley

Table 114: Scoring Criteria - Departmental Classification

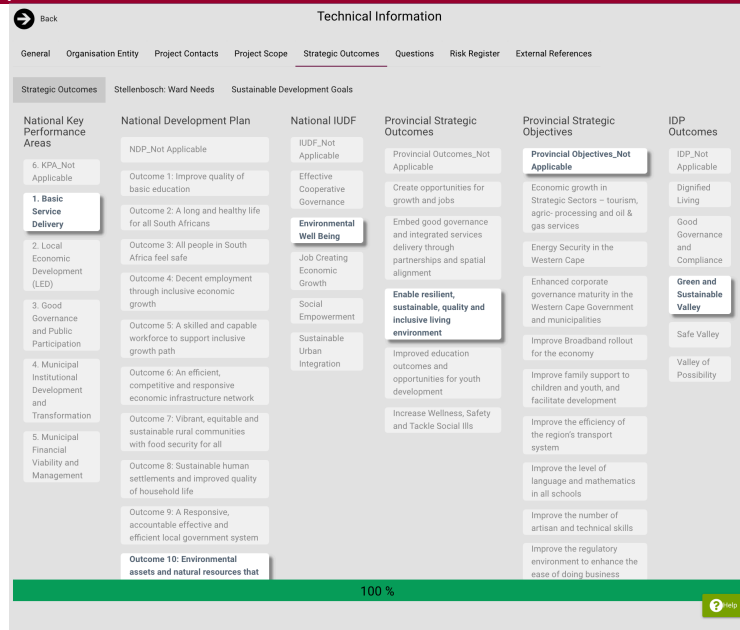
Category	Description
Definition	Specific departments' mandate is to deliver specific services. Those services correlate with the definition of this IDP outcome.
Branch Weight	20
Input Variable	The department by which the project is owned.
Process	=if(x in ("Environmental Management: Urban Greening","Environmental Management: Nature Conservation","Disaster Management","Parks, Rivers and Area Cleaning"),100,0)
Mathematical Operator	Value achieved by the project is passed through to the parent scoring branch.

Table 115: Scoring Criteria - IDP Alignment

Category	Description
Definition	IDP alignment measures the alignment of a project with respect to the different IDP outcomes.
Branch Weight	20

Category
Input Variable

Description



The screenshot displays a 'Technical Information' interface with a 'Back' button and a navigation bar including 'General', 'Organisation Entity', 'Project Contacts', 'Project Scope', 'Strategic Outcomes', 'Questions', 'Risk Register', and 'External References'. The 'Strategic Outcomes' section is active, showing a table with columns for 'National Key Performance Areas', 'National Development Plan', 'National IUDF', 'Provincial Strategic Outcomes', 'Provincial Strategic Objectives', and 'IDP Outcomes'. The table lists various outcomes and their corresponding descriptions. A green bar at the bottom indicates a score of '100 %'.

Process

If a project aligns in terms of this specific IDP outcome, it scores 100% on this branch, if not, it scores 0 on this branch.

Mathematical Operator

Maximum value achieved by the project is passed through to the parent scoring branch.

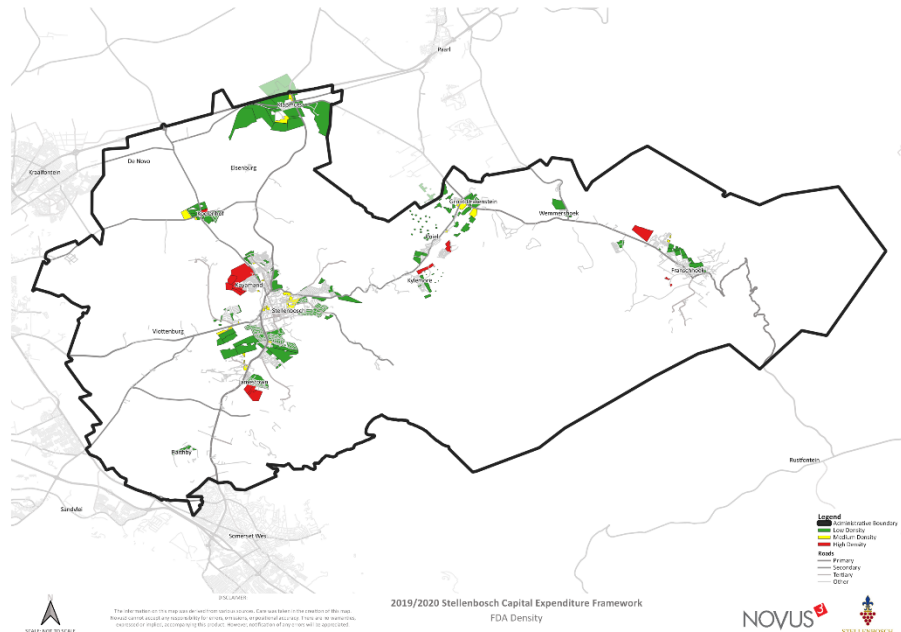
Table 116: Scoring Criteria - Density of Area

Category	Description
Definition	The density of the area is a function of number of people per delineated area, usually expressed as dwelling units per hectare.
Branch Weight	60
Input Variable	<p>The location of a project is evaluated at the hand of three key spatial filters, each with a variation of importance. These include:</p> <p>Future Development Areas (80)</p> <p>High (100)</p> <p>Medium (75)</p>

Category

Description

Low (50)



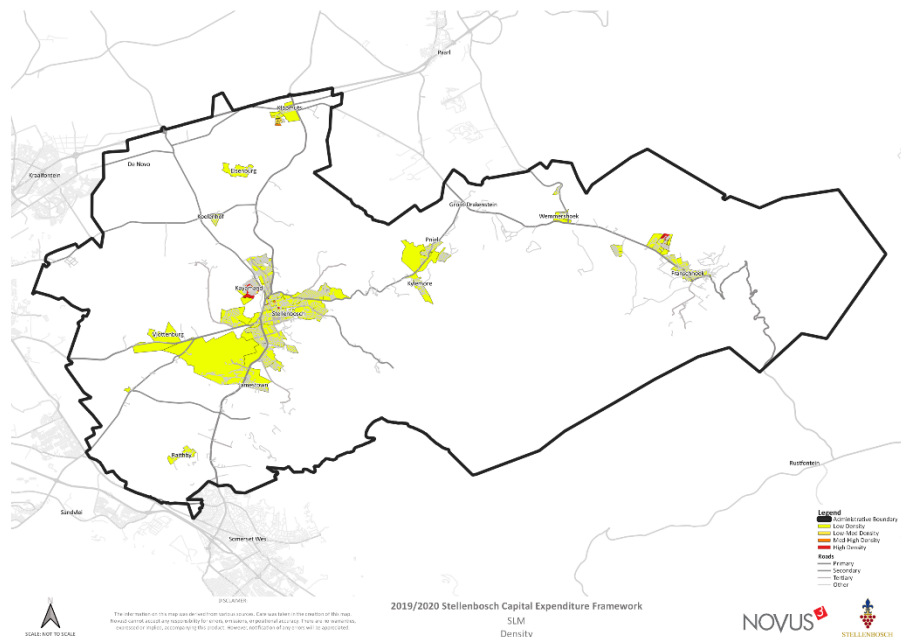
Current Density Map (100)

High Density (>80 units/ha) (100)

Medium to High Density (>60 & <80 units/Ha) (80)

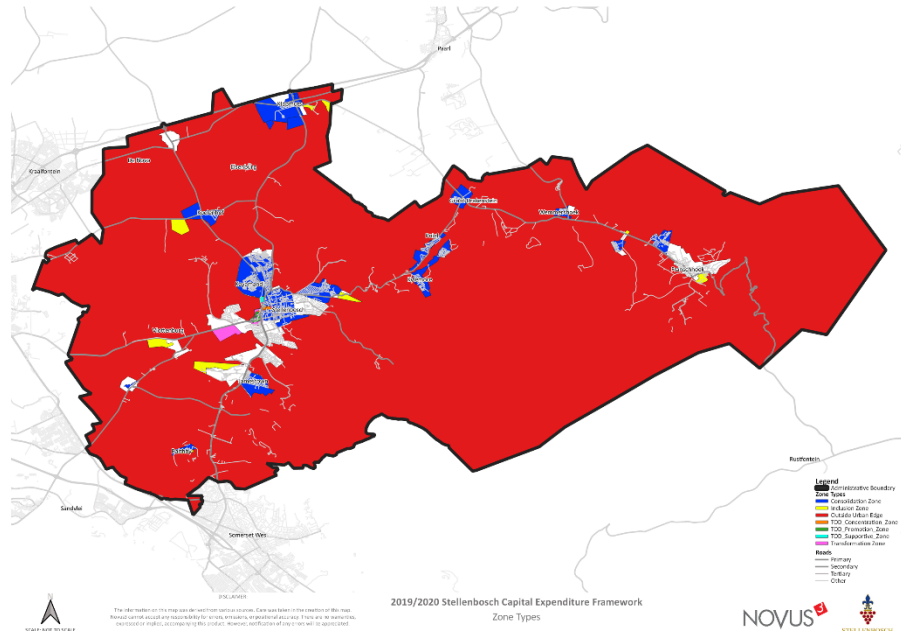
Low to Medium Density (>40 & <60 units/Ha) (60)

Low Density (<40 units/Ha) (40)



TOD (100)

Category	Description
	Concentration Zone (100)
	Promotion Zone (75)
	Supportive Zone (50)



Process	If a projects' work location are within the above mentioned areas, it will score and be eligible to score.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 117: Scoring Criteria - Portfolio

Category	Description
Definition	A portfolio of projects is a specific grouping of projects all aligned with a similar characteristic or mandate. In this case, four portfolios are used to test this branch of the prioritisation model.
Branch Weight	30
Input Variable	Projects belonging the following portfolios are eligible to score on this branch.
	Public Transport Portfolio (100)
	NMT Portfolio (100)

Category	Description
	Renewable energy Portfolio (100)
	Carbon Offset Portfolio (100)
Process	If a project is part of a specific portfolio, it is eligible to score on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.1.5 IDP Outcome 5: Safe Valley

Table 118: Scoring Criteria - Departmental Classification

Category	Description
Definition	Specific departments' mandate is to deliver specific services. Those services correlates with the definition of this IDP outcome.
Branch Weight	65
Input Variable	The department by which the project is owned.
Process	=if(x in ("Community and Protection Services"),100,0)
Mathematical Operator	Value achieved by the project is passed through to the parent scoring branch.

Table 119: Scoring Criteria - IDP Alignment

Category	Description
Definition	IDP alignment measures the alignment of a project with respect to the different IDP outcomes.
Branch Weight	65

Category

Description

Input Variable

[Back](#)

[General](#)
[Organisation Entity](#)
[Project Contacts](#)
[Project Scope](#)
[Strategic Outcomes](#)
[Questions](#)
[Risk Register](#)
[External References](#)

Strategic Outcomes
 Stellenbosch: Ward Needs
 Sustainable Development Goals

National Key Performance Areas	National Development Plan	National IUDF	Provincial Strategic Outcomes	Provincial Strategic Objectives	IDP Outcomes
6. KPA, Not Applicable	NDP, Not Applicable	IUDF, Not Applicable	Provincial Outcomes, Not Applicable	Provincial Objectives, Not Applicable	IDP, Not Applicable
1. Basic Service Delivery	Outcome 1: Improve quality of basic education	Effective Cooperative Governance	Create opportunities for growth and jobs	Economic growth in Strategic Sectors - tourism, agro-processing and oil & gas services	Dignified Living
2. Local Economic Development (LED)	Outcome 2: A long and healthy life for all South Africans	Environmental Well Being	Embed good governance and integrated services delivery through partnerships and spatial alignment	Energy Security in the Western Cape	Good Governance and Compliance
3. Good Governance and Public Participation	Outcome 3: All people in South Africa feel safe	Job Creating Economic Growth	Enable resilient, sustainable, quality and inclusive living environment	Enhanced corporate governance maturity in the Western Cape Government and municipalities	Green and Sustainable Valley
4. Municipal Institutional Development and Transformation	Outcome 4: Decent employment through inclusive economic growth	Social Empowerment	Improved education outcomes and opportunities for youth development	Improve Broadband rollout for the economy	Safe Valley
5. Municipal Financial Viability and Management	Outcome 5: A skilled and capable workforce to support inclusive growth path	Sustainable Urban Integration	Increase Wellness, Safety and Tackle Social Ills	Improve family support to children and youth, and facilitate development	Valley of Possibility
	Outcome 6: An efficient, competitive and responsive economic infrastructure network			Improve the efficiency of the region's transport system	
	Outcome 7: Vibrant, equitable and sustainable rural communities with food security for all			Improve the level of language and mathematics in all schools	
	Outcome 8: Sustainable human settlements and improved quality of household life			Improve the number of artisan and technical skills	
	Outcome 9: A Responsive, accountable effective and efficient local government system			Improve the regulatory environment to enhance the ease of doing business	
	Outcome 10: Environmental assets and natural resources that				

100 %

[Help](#)

Process

If a project aligns in terms of this specific IDP outcome, it scores 100% on this branch, if not, it scores 0 on this branch.

Mathematical Operator

Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.2 Spatial Alignment

The spatial alignment goal or theme of the prioritisation model evaluates the degree to which projects aligns with the spatial development framework and other spatial targeting objectives set out in various strategic documents of the municipality (i.e. IDP, SDF, CIF etc.). The alignment of projects to the spatial targeting areas of the municipality are scored according to the following criteria:

- Spatial Development Framework; and
- Inside Urban Edge.

These criteria measured under these sub-branches seek to ensure that projects within the municipal budget align with the spatial structure or spatial development objectives of the municipality.

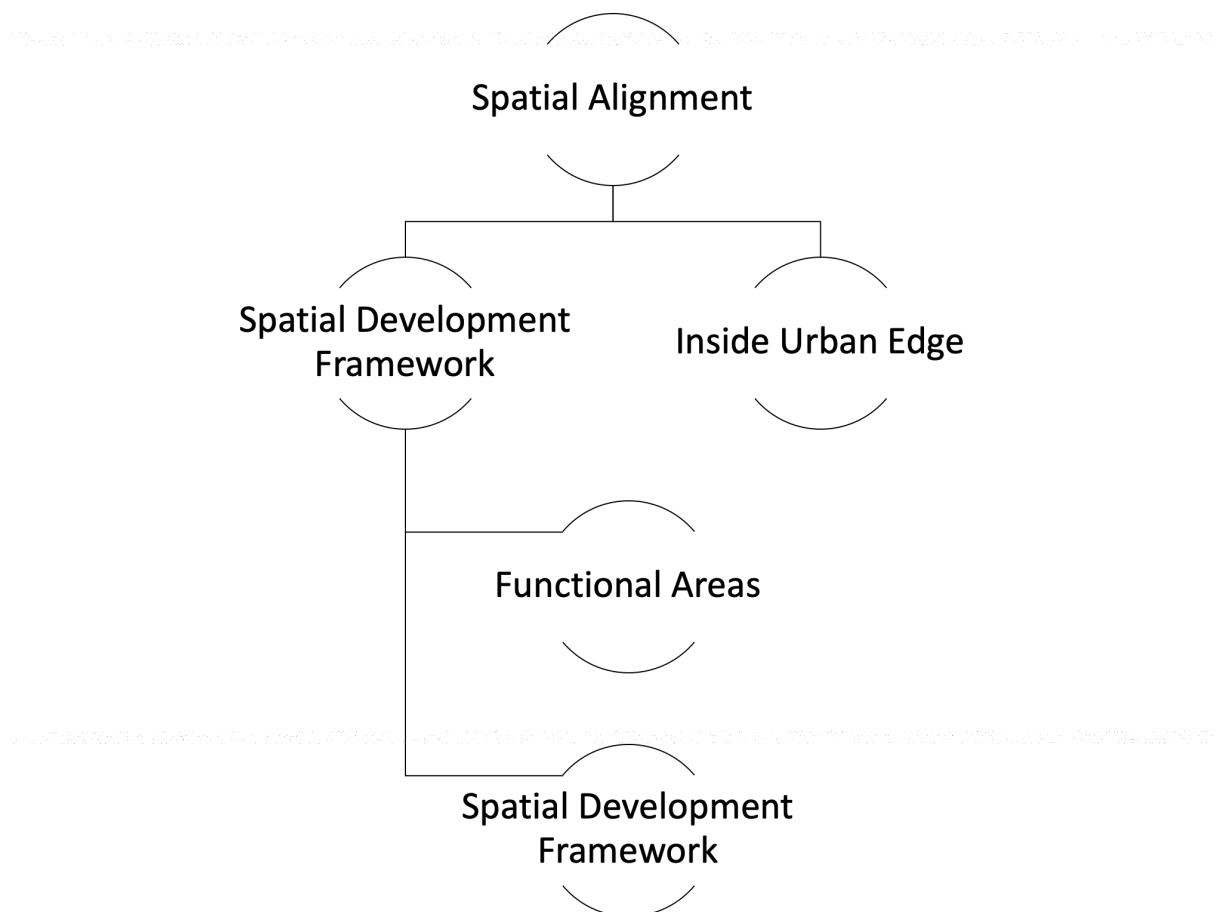


Figure 119: Capital Prioritisation Model: Spatial Alignment

13.4.2.1 Spatial Development Framework

Table 120: Scoring Criteria - Functional Areas

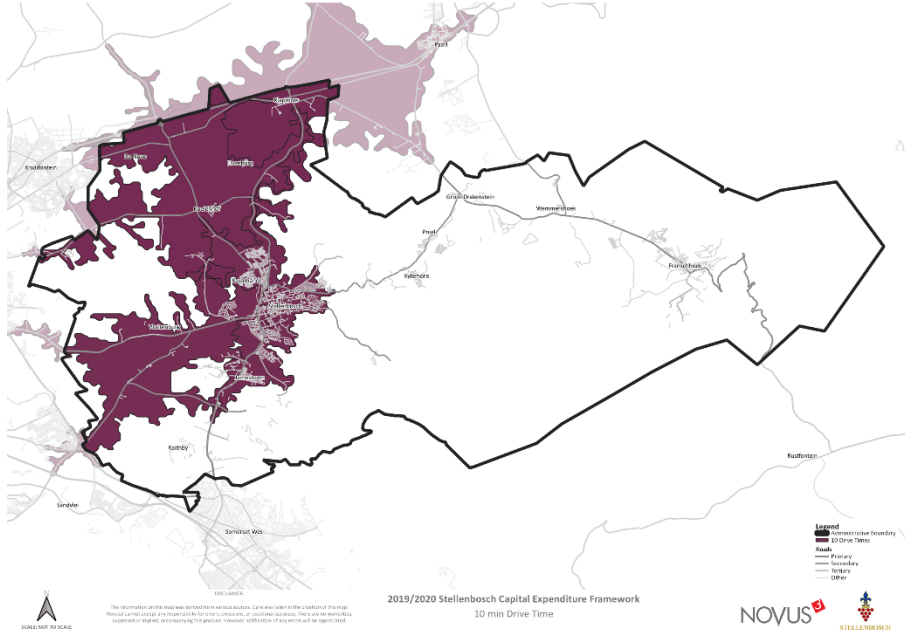
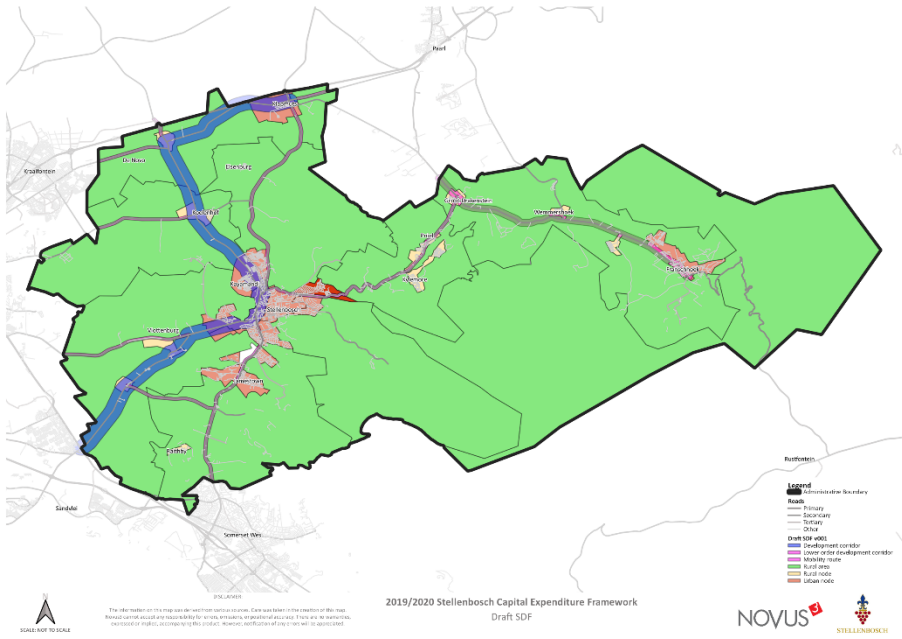
Category	Description
Definition	The IUDF requires specific focus on functional areas within the municipality. These boundaries are determined not by the jurisdictional boundary of the municipality, but rather the economic effect of a certain node within the municipality.
Branch Weight	60
Input Variable	<p>The four Functional areas have been defined as:</p> <p>Klapmuts (50)</p> <p>Koelenhof (50)</p> <p>Vlottenburg (50)</p> <p>Stellenbosch Central (50)</p>
	 <p>2019/2020 Stellenbosch Capital Expenditure Framework 10 min Drive Time</p>
Process	If a project's works location is within one of the functional areas it will be partially elevated on this branch. If it is within more than one, it will be elevated in totality.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

Table 121: Scoring Criteria - Spatial Development Framework

Category	Description
Definition	The spatial Development Framework is the strategic guiding document of the municipality. A hierarchy of nodes has been defined in which development must be promoted in order to control urban sprawl, and to ensure effective and efficient investment.
Branch Weight	40
Input Variable	 <p>The map displays the geographical layout of Stellenbosch, with various nodes and corridors identified for development. The legend indicates the following categories:</p> <ul style="list-style-type: none"> Legend: <ul style="list-style-type: none"> Administrative boundary Roads: <ul style="list-style-type: none"> Primary Secondary Tertiary Other Draft SDF 4001: <ul style="list-style-type: none"> Development corridor Lower order development corridor Ministry route Rural node Rural node Urban node <p>2019/2020 Stellenbosch Capital Expenditure Framework Draft SDF</p>
Process	If a project is within the identified areas, it will enjoy a relative elevation of its score on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.2.2 Inside Urban Edge

Table 122: Scoring Criteria - Urban Edge

Category	Description
Definition	Urban sprawl is a real issue in South African municipalities and should be managed in such a way that development correlates with the strategic vision of the city; in a sustainable, yet integrated fashion.

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13.4.3 Financial Alignment

The financial alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget are considered to be credible, affordable, funded, applied to expand the rateable asset base and improving the fiscal position of the municipality. The financial alignment score is calculated within six distinct categories, namely:

- Fiscal deficit as % of GDP;
- Affordability;
- Confidence in Cost Estimate;
- Co-Funding;
- Lifespan of asset; and
- Opex Consequence.

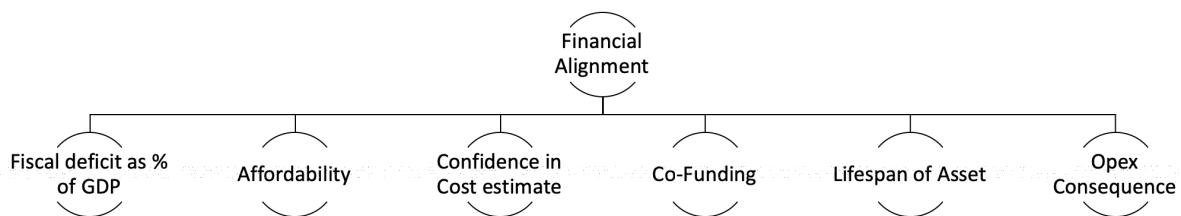
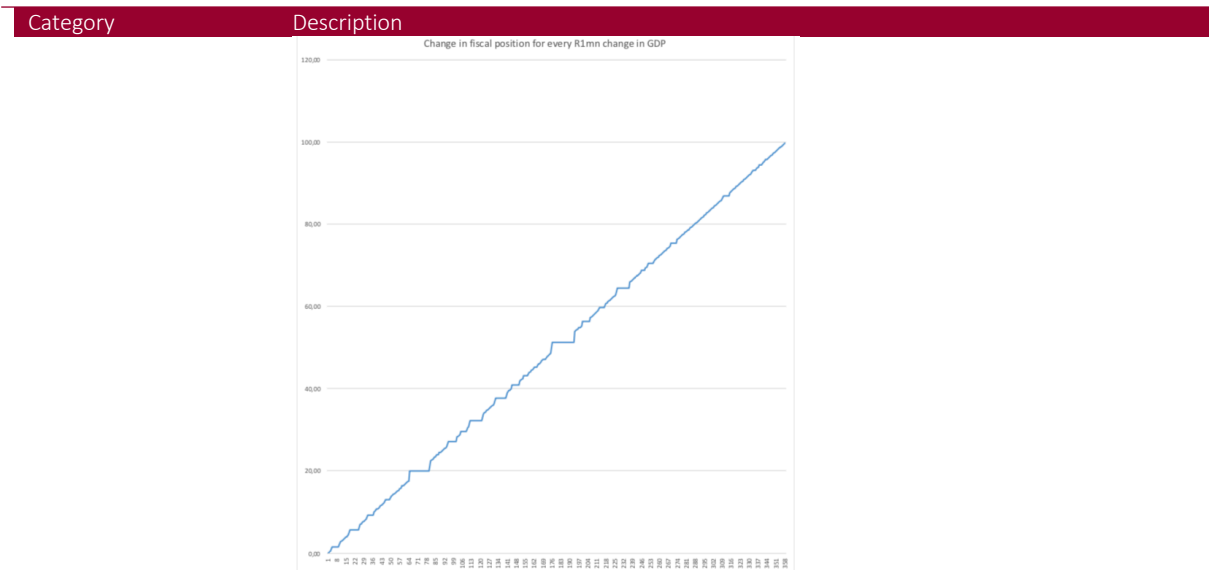


Figure 120: Capital Prioritisation Model Financial Alignment

13.4.3.1 Fiscal deficit as % of GDP

Table 123: Scoring Criteria - Change in fiscal position

Category	Description
Definition	<p>The 'fiscal deficit to GDP ratio'-indicator measures changes in the deficit position of the City/Province relative to changes in economic activity, which again is a result of the project/programme/portfolio of projects. The indicator number will always be very small, but need to be interpreted as the % improvement (if positive) or deterioration (if negative) of the deficit relative to GDP.</p> <p>The indicator is expressed as the change in fiscal deficit position (measured in terms of R'000) for every R1m change in GDP. Example: a number of 0.00001 need to be interpreted as a R10000 improvement in the fiscal position, i.e. a R10000 decline in the deficit of the City/Province per R1m GDP gains. Therefore, in the case where a project results in R50 mil additional GDP, the deficit should decline with R500 000.</p> <p>However, the primary value of the fiscal indicator is (1) to determine whether the project/programme will have a POSITIVE impact on the fiscal position, i.e. result in a decline in the deficit, and (2) to compare various projects in terms of their impact on the City's (Province's) financial position.</p>
Branch Weight	10
Input Variable	Economic Impact Model Outputs
Process	<p>The indicator calculated by the EIM is normalised by multiplying the calculated EIM value (percentage points) with a common denominator namely a million. This normalises the indicator to Rand per R1mil GDP increase. The last step in the process is to rank the actual outcomes linearly from most positive to least positive. This results in the typical graph shown below. The project with the highest score, scores 100 and the project with the lowest score, scores 0. The rest of the projects scores proportional to their rank.</p>



Mathematical
Operator

Ranked value achieved by the project is passed through to the parent scoring branch.

13.4.3.2 Affordability

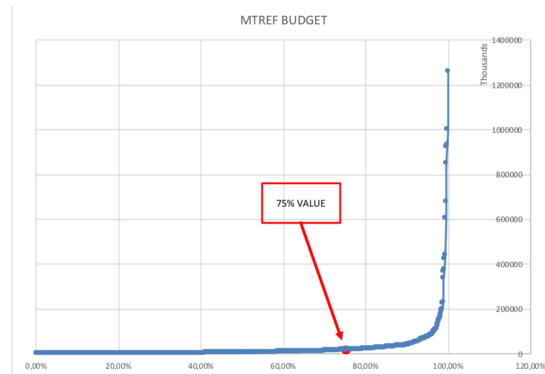
Table 124: Scoring Criteria - Affordability (75th Percentile Test)

Category	Description
Definition	<p>With “Affordability”, all the project budget demands summed over the MTREF period is plotted from smallest to largest. The 75th percentile value is calculated across this range of values. This value is used as an approximation of what may be considered as the turning point in the budget range beyond which project can be considered to become increasingly expensive. The term “expensive” is used with great circumspection and should not be used beyond the context of this model. It simply is an indicator representative of the specific range of budget values that were requested over the MTREF for this specific budget cycle.</p>

Projects that are “cheaper” than the 75th percentile does not have a great variance in requested budgets and can all be drawn in a relatively flat curve on a graph as shown on the graph below. Projects that are more expensive than the 75th percentile, increases in budget exponentially and rapidly has the “crowding out” effect. “Crowding out” means that a single “expensive” project budget may “crowd out” numerous smaller project budgets. In terms of service delivery, having more projects visibly being implemented often has a greater impact than one “mega project”. There are of course many exceptions to this assumption. This criterion simply penalises – from a purely financial budgeting perspective – projects that are excessively expensive.

Category	Description
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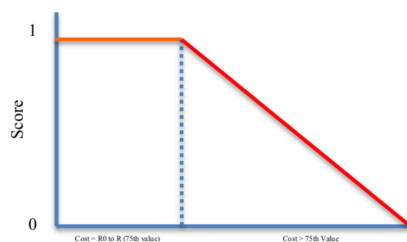
It must be kept in mind that this is simply one criteria out of many in the model, and does not have an overriding effect. Contextually though, when looking at the financial planning aspects of a municipality purely, without consideration of anything else, the “expensiveness” of a project is a fundamental consideration.



Branch Weight 30

Input Variable The input values for this criterion is the total capital budget requested over the MTREF, the 75th percentile of all capital budget requests over the MTREF and the maximum capital budget request over the MTREF.

Process Score = 100 if calculated value <= 75th percentile of MTREF
The score decays from 100 to zero using linear regression for any MTREF budget that is more expensive than the 75th percentile MTREF budget (over the entire range of budgets for all projects).



$$y = \left(\frac{1}{75th - Maximum} \right) x - \left(\frac{1}{75th - Maximum} \right) Maximum$$

Mathematical Operator Calculated value achieved by the project is passed through to the parent scoring branch.

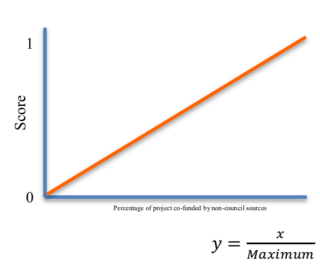
13.4.3.3 Confidence in Cost Estimate

Table 125: Scoring Criteria - Confidence in Cost Estimate

Category	Description														
Definition	<p>The “Credibility” of the budget that is being asked for, is measured in by testing the credibility or accuracy of the cost estimate as well as the estimated lifespan of the asset for which funding is requested. The scale provided for the evaluation of budget estimate accuracy, is the scale provided by National Treasury in terms of their CIDMS guidelines. Better accuracy is awarded as well as a longer estimated lifespan of the asset under evaluation.</p> <p>The project owner needs to indicate the accuracy of the budget estimate based on the following scale:</p> <div> <p>✓ a. Class 1 (-3% to 3%)</p> <p>b. Class 2 (-5% to 5%)</p> <p>c. Class 3 (-10% to 10%)</p> <p>d. Class 4 (-15% to 20%)</p> <p>e. Class 5 (-20% to 30%)</p> <p>f. Quotation / Tender</p> </div>														
Branch Weight	30														
Input Variable	The input variables are taken from the predetermined drop-down list representing the National Treasury prescribed ranges as contained in their CIDMS guidelines.														
Process	<p>The scoring mechanism takes the form of a stepping function with each option carrying a representative score.</p> <div> <table> <thead> <tr> <th></th><th>Score</th></tr> </thead> <tbody> <tr> <td>• Class 1 (-3% ↔ 3%)</td><td>100</td></tr> <tr> <td>• Class 2 (-5% ↔ 5%)</td><td>90</td></tr> <tr> <td>• Class 3 (-10% ↔ 10%)</td><td>80</td></tr> <tr> <td>• Class 4 (-15% ↔ 20%)</td><td>65</td></tr> <tr> <td>• Class 5 (-20% ↔ 30%)</td><td>50</td></tr> <tr> <td>• Quotation / Tender</td><td>100</td></tr> </tbody> </table> </div>		Score	• Class 1 (-3% ↔ 3%)	100	• Class 2 (-5% ↔ 5%)	90	• Class 3 (-10% ↔ 10%)	80	• Class 4 (-15% ↔ 20%)	65	• Class 5 (-20% ↔ 30%)	50	• Quotation / Tender	100
	Score														
• Class 1 (-3% ↔ 3%)	100														
• Class 2 (-5% ↔ 5%)	90														
• Class 3 (-10% ↔ 10%)	80														
• Class 4 (-15% ↔ 20%)	65														
• Class 5 (-20% ↔ 30%)	50														
• Quotation / Tender	100														
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.														

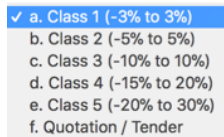
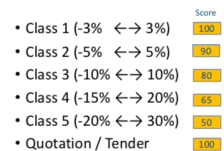
13.4.3.4 Co-Funding

Table 126: Scoring Criteria - Co-funding

Category	Description
Definition	<p>The “Co-Funding” criterion appraises how much of the requested capital is funded by sources other than the municipality’s own funds. The more co-funding by other sources, the more the project will score under this criterion. The logic behind this is two-fold. Firstly, the more external funding is used, the lesser is the burden on municipality’s own ability to fund the project. Secondly, some of the co-funding sources within a municipal environment is conditional and there are often time-limitations or conditions to these external sources.</p> <p>Therefore, if the funding is not utilised, the opportunity or availability of the funding expires or lapses. From a budgeting and planning perspective, a project that may be slightly lower down the ranks of priorities, but that has other sources of funding, may be prioritised more in order to gain the benefit from its implementation and the availability of funding to do so.</p>
Branch Weight	10
Input Variable	The input values for this criterion is the total capital budget requested over the MTREF and the percentage of co-funding over the MTREF.
Process	 <p>A maximum score of 100 is achieved under this criterion of the project is 100% co-funded by other sources. The more co-funding, the better the score here.</p>
Mathematical Operator	Calculated value achieved by the project is passed through to the parent scoring branch.

13.4.3.5 Lifespan of asset

Table 127: Scoring Criteria - Lifespan of Asset

Category	Description
Definition	The “Credibility” of the budget that is being asked for, is measured in by testing the credibility or accuracy of the cost estimate as well as the estimated lifespan of the asset for which funding is requested. The scale provided for the evaluation of budget estimate accuracy, is the scale provided by National Treasury in terms of their CIDMS guidelines. Better accuracy is awarded as well as a longer estimated lifespan of the asset under evaluation.
Branch Weight	10
Input Variable	<p>The input variables are taken from the predetermined drop-down list representing the National Treasury prescribed ranges as contained in their CIDMS guidelines.</p> 
Process	<p>The scoring mechanism takes the form of a stepping function with each option carrying a representative score.</p> 
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

13.4.3.6 Opex Consequence

Table 128: Scoring Criteria - OpEx Consequence

Category	Description
Definition	Municipalities are faced with the conundrum of balancing spatial, social and economic transformation, whilst maintaining the existing asset base of the city. Spatial, social and economic transformation is often associated with the provision of new, quality infrastructure in support of liveable communities either in newly demarcated development areas or as part of upgrading severely marginalized

Category	Description
	<p>communities, with a poor service provision history and a backlog of service delivery demands.</p> <p>A balanced approach to capital spending, focusing partially on the provision of new infrastructure, whilst maintaining the existing asset base and revenue stream is important. A fundamental consideration of all capital expenditure therefore must include the estimated OpEx burden that will result from the capital that is being spent. The OpEx burden is inevitable – a situation can however arise whereby the OpEx continues to grow to the extent that it starts to impact on the available CapEx.</p>
Branch Weight	10
Input Variable	The input variables are taken from the predetermined drop-down list on CP3.

What is the estimated annual operating cost of this project, once implemented?	0 - R10,000	No Selection Not applicable 0 - R10,000 R10,001 - R100,000 R100,001 - R500,000 R500,001 - R1,000,000 R1,000,001 - R5,000,000 > R5,000,000
Project Risk		
Opex Classification		
Moveable Asset / Operational capital	<input checked="" type="checkbox"/>	

Process

Mathematical Operator The highest score value on this branch that is achieved is passed through.

13.4.4 Economic Alignment

The economic alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget contributes to the growth of the municipal economy and improves the economic position of the residents within the municipality.

A macro-economic impact model (EIM) was developed for the municipality specifically to make use of the data from the CP3 system. The econometric model is specific for the municipality and draws from a sophisticated range of financial data, regional data, and population data sourced from STATSSA. As such, the EIM generates values for the impact of individual and portfolio capital projects in terms of a set of economic, socio-economic and fiscal indicators – for the City as a whole, as well as a selection of key sub-regions or ‘main places’.

The EIM is based on the outputs of a comprehensive suite of econometric models. The workings of the EIM are dynamic and consider the indirect City-wide impacts of projects and programmes – not only the localised ward-specific impact.

The EIM therefore captures the iterative, dynamic impacts of all of the role-players within the economy – households, business, government, foreign sector, as well as the full economic flow of goods, services, factors and money is accounted for, and an iterative computational process is utilised.

The outputs from the economic model is further augmented spatially by evaluating the alignment of the project’s location and affected area, with geographic areas that were graded across the entire municipal area in terms of its economic impact in a separate economic study that was conducted for this purpose.

The economic alignment score is calculated within two distinct categories, namely:

- Focus on targeted portfolios;
- Focus on impact; and
- Focus on people.

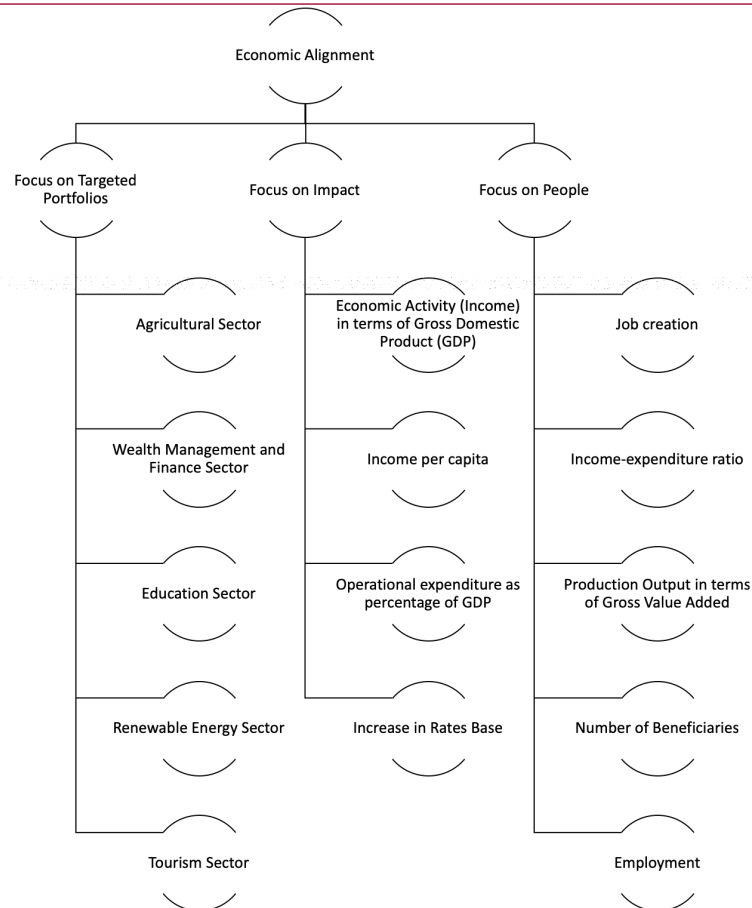


Figure 121: Capital Prioritisation Model: Economic Alignment

13.4.4.1 Focus on targeted portfolios

Table 129: Scoring Criteria - Targeted Portfolios

Category	Description
Definition	A portfolio of projects is a specific grouping of projects all aligned with a similar characteristic or mandate. In this case, four portfolios are used to test this branch of the prioritisation model.
Branch Weight	10
Input Variable	Projects belonging to the following portfolios are eligible to score: Agriculture Sector Wealth Management and Finance Sector Education Sector Renewable Energy Sector Tourism Sector

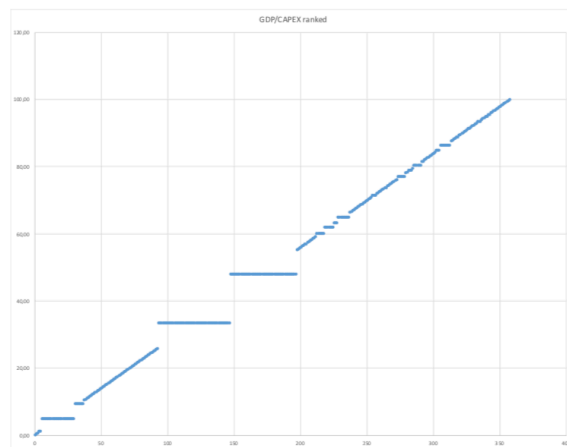
Category	Description
Process	If a project is part of a specific portfolio, it is eligible to score on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.4.2 Focus on impact

Table 130: Scoring Criteria - Economic Activity (Income) in terms of GDP

Category	Description
Definition	<p>GDP measures/represents the value of economic activity (income) that has been generated across ALL industries as a result of the project/programme/portfolio of projects. It takes into account the value of taxes and subsidies on both production and consumption goods/services. As such, the GDP figure is presented at 'market price' value. It is measured in nominal Rand, i.e. at current prices. The number represents the TOTAL, NET impact of the project, i.e. taking into account the 'winners' and 'losers' in the economy; the benefits and costs associated with the project.</p> <p>The number is not 'time'-bound, in the sense that the GDP figure represents the full impact, once the project investment/spending has had time to 'mature', i.e. the investment/spending impact has filtered ('rippled') through the economy and the feedback have stabilised. As such, the number is an indicating of the net POTENTIAL income impact of the project/programme, assuming no other interventions/interruptions, etc.</p> <p>The GDP indicator is valuable in comparing the relative impact of different projects/programmes or portfolios of projects, in terms of the additional economic activity that they 'unlock' for every Rand invested and/or spent over the project implementation time-line. The GDP-indicator also provides a measure of the 'net tax revenue' available to government, but also the 'net tax burden' on producers and consumers.</p>
Branch Weight	25
Input Variable	Economic Impact Model Outputs
Process	The indicator calculated by the EIM is normalised by dividing the calculated EIM value with a common denominator namely the capital requested over the MTREF. This is done as a necessary step to establish comparability between projects and wards. The last step in the process is to rank the actual

Category	Description
	outcomes linearly from most positive to least positive. This results in the typical graph shown below.



Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.
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Table 131: Scoring Criteria - Income per capita

Category	Description
Definition	The “Income per Capita” indicator measures the Rand value of income (through GDP) per member of the population. It links the changes in economic activity (on the back of ‘matured’ implementation of the project spending on the GDP to household income and therefore presents a measure for income distribution as well as the effectiveness of the project in achieving socio-economic gains.
Branch Weight	25
Input Variable	Economic Impact Model Outputs
Process	The indicator calculated by the EIM is normalised by dividing the calculated EIM value with a common denominator namely the capital requested over the MTREF. This normalises the indicator to Rand per R1bn capital spending. The last step in the process is to rank the actual outcomes linearly from most positive to least positive. This results in the typical graph shown below.

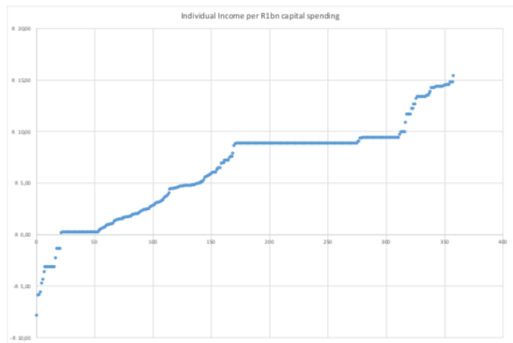
Category	Description
	
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

Table 132: Scoring Criteria - Operational expenditure as percentage of GDP

Category	Description
Definition	<p>The 'operational expenditure to GDP'-indicator measures the impact of the project/programme/portfolio of projects on the operational expenditure of the City/Province, which include the wage bill impact of the project(s).</p> <p>Again, the indicator number will be very small, and also need to be interpreted as the % increase (if positive) in government expenditure relative to the project's income gains. The indicator is expressed in terms of a R'000 (thousand rand) increase in operational expenditure for every R1m change in GDP associated with the project(s). Therefore, a number of 0.00002 need to be interpreted as a R20000 increase in operational expenditure per R1m project income (GDP gains). In the case of a R50 mil additional GDP, the operational expenditure is expected to increase with R100 000.</p> <p>However, this number need to be interpreted along with the previous fiscal-indicator. The fiscal indicator ALREADY incorporates the changes in operational expenditure. Therefore, in the case where the fiscal deficit-indicator is positive (i.e. a decline in deficit), while the operational indicator is also positive (i.e. increase in expenses), the implication is that the income and potential revenue gains for the City/Province is larger than the increased and associated operational expense.</p> <p>This indicator is therefore valuable in (1) planning with respect to operational expenditure, (2) making the business case for high- impact investment projects, which over time (maturity) generate sufficient income to cover the associated increased operational expenditure, and (3) compare project(s)</p>

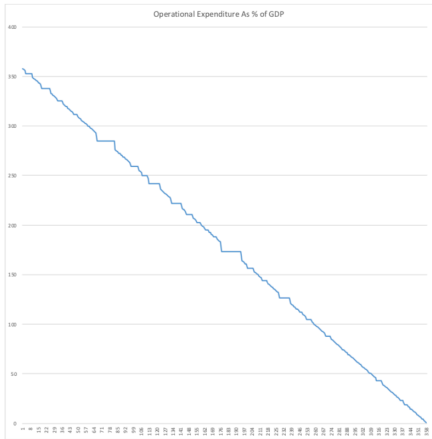
Category	Description
	with respect to their relative impact on the City's (Province's) financial position.
Branch Weight	25
Input Variable	Economic Impact Model Outputs
Process	<p>It is not necessary to normalise this indicator as is the case with the other Economic Impact Model indicators. The indicator value is already reflected as a percentage of GDP. The values for the database is normally ranked as depicted below.</p> 
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

Table 133: Scoring Criteria - Increase in Rates Base

Category	Description
Definition	<p>The "Increase in rates base" evaluates whether a project's implementation will contribute towards rates and taxes directly or not. From a purely financial perspective, if a project's implementation will directly lead to increased rates and taxes that would be collected by the municipality, this will be beneficial.</p> <p>In order to determine whether a project will contribute to rates and taxes, it has to be ascertained whether the project represents a service (e.g. the provision of electricity) that can be levied from the end-user. Here, the benefit of the data that can be harvested from the MSCOA classification process is evident. The MSCOA classification assists to determine whether the funding applied for is for new infrastructure or for the upgrading of existing infrastructure in order to improve capacities.</p>

Category	Description
Branch Weight	25
Input Variable	<p>A two-tier test is applied to determine to what extent the existing rates base or asset base is protected and expanded. The first test which is applied is based on the MSCOA project action and sub-action relating to the MSCOA Project Segment. The following categories are tested:</p> <p>New rateable infrastructure: MSCOA project action = “New”</p> <p>Upgrading of existing rateable infrastructure: MSCOA project sub- action = “Upgrading”</p> <p>Maintenance of rateable infrastructure: MSCOA project sub-action = “Renewal”</p> <p>The following category weights are applied:</p> <p>New rateable infrastructure = 100</p> <p>Upgrading of existing rateable infrastructure = 75</p> <p>Maintenance of rateable infrastructure = 50</p> <p>Once the projects have been pre-filtered for new, upgrading or renewal actions, a second test is performed to ascertain whether the project is from one of the following departments:</p> <p>Energy</p> <p>Water</p> <p>Sanitation</p>
Process	<p>If a project is requesting capital and it emanates from one of the departments that provides infrastructure that directly leads towards an increase in the rates and taxes that can be collected, the project will score fully under this criterion.</p>
Mathematical Operator	<p>Scored value achieved by the project is passed through to the parent scoring branch.</p>

13.4.4.3 Focus on people

Table 134: Scoring Criteria - Job creation

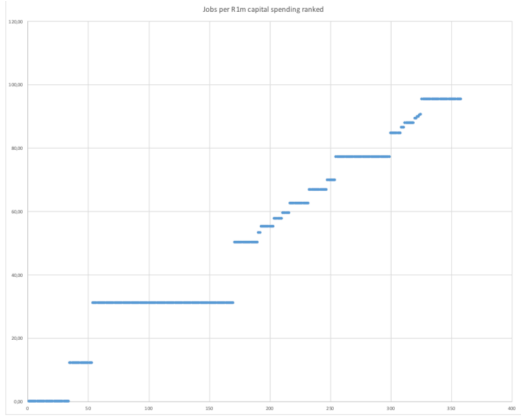
Category	Description
Definition	<p>The “Job Creation” indicator represents the number of people that may become employed across all industries as a result of the project. It distinguishes between “job-opportunities” and “job-absorption” – these are distinctly different. Job opportunities measures the total number of potential jobs that may be generated across all industries on the back of matured implementation. Job absorption is the number of jobs that may be occupied across all industries. The job absorption figure adjusts (lowers) the job opportunities figure for structural unemployment, i.e. the percentage of the labour force that are unemployable for reasons of lack of skills, socio-economic impediments, etc.</p>
Branch Weight	20
Input Variable	Economic Impact Model Outputs
Process	<p>The indicator calculated by the EIM is normalised by dividing the calculated EIM value with a common denominator namely the capital requested over the MTREF. This is done as a necessary step to establish comparability between projects and wards. The result is presented as jobs created per R1m capital spent. The last step in the process is to rank the actual outcomes linearly from most positive to least positive. This results in the typical graph shown below.</p> 
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

Table 135: Scoring Criteria - Income-expenditure ratio

Category	Description
Definition	<p>The “Income to expenditure ratio” indicator is an indicator of surplus income of potential savings per household. This is a direct “wealth measure”. It</p>

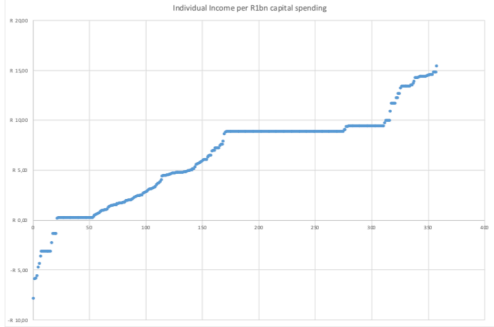
Category	Description
	expresses the potential income gains relative to the higher spending behaviour on the back of changes in economic activity. This indicator therefore measures the impact/effectiveness of the investment/spending portfolio in increasing households' propensity to save. As such, the indicator is also a measure of 'wealth' improvement associated with the project.
Branch Weight	20
Input Variable	Economic Impact Model Outputs
Process	<p>The indicator calculated by the EIM is normalised by multiplying the calculated EIM value with a common denominator namely the GDP value. This normalises the indicator to Rand per R1bn GDP increase. The last step in the process is to rank the actual outcomes linearly from most positive to least positive. This results in the typical graph shown below.</p> 
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

Table 136: Scoring Criteria - Production Output in terms of GVA)

Category	Description
Definition	<p>Gross Value Addition (GVA) measures/represents the value of economic activity (income) that has been generated across ALL industries as a result of the project/programme/portfolio of projects. It does not take into account the value of taxes and subsidies on both production and consumption goods/services. As such, the GVA figure is presented at 'market price' value. It is measured in nominal Rand, i.e. at current prices.</p> <p>The number represents the TOTAL, NET impact of the project, i.e. taking into account the 'winners' and 'losers' in the economy; the benefits and costs associated with the project. The number is not 'time'-bound, in the sense that the GVA figure represents the full impact, once the project investment/spending has had time to 'mature', i.e. the investment/spending impact has filtered ('rippled') through the economy and the feedback have stabilised. As such, the number is an</p>

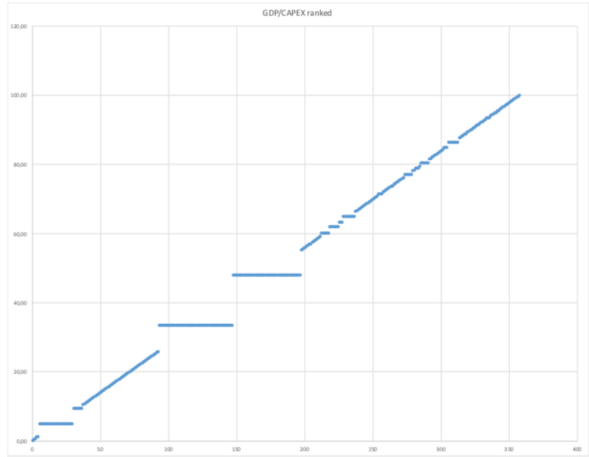
Category	Description
	<p>indicating of the net POTENTIAL income impact of the project/programme, assuming no other interventions/interruptions, etc.</p> <p>The GVA indicator is valuable in comparing the relative impact of different projects/programmes or portfolios of projects, in terms of the additional economic activity that they 'unlock' for every Rand invested and/or spent over the project implementation time-line.</p>
Branch Weight	20
Input Variable	Economic Impact Model Outputs.
Process	<p>The indicator calculated by the EIM is normalised by dividing the calculated EIM value with a common denominator namely the capital requested over the MTREF. This is done as a necessary step to establish comparability between projects and wards. The last step in the process is to rank the actual outcomes linearly from most positive to least positive. This results in the typical graph shown below.</p>
	
Mathematical Operator	Ranked value achieved by the project is passed through to the parent scoring branch.

Table 137: Scoring Criteria - Number of Beneficiaries

Category	Description
Definition	<p>The spatial analysis capability of the CP3 system, in combination with the affected area that is drawn for each project, is used to automatically deduct the number of beneficiaries that will be impacted or benefitted by the project. From an economic perspective, the more people that are affected by an investment, the larger the impact should be on the economy.</p>

Category	Description
Branch Weight	20
Input Variable	Project affected area
Process	<p>The number of beneficiaries of the Statistics South Africa Census 2011 is loaded onto the CP3 system at small area level. The proportional spatial intersect of the project's affected area and the Census 2011 small area layer is calculated. The sum of the population in the intersected Census 2011 small area layer is divided by the maximum population affected by any project in the CP3 database in order to create a beneficiary population index. Projects are therefore ranked from highest number of beneficiaries impacted to the lowest number of beneficiaries impacted. The above calculation is expressed by the following mathematical equation:</p> $Y = (x / \text{Max Affected Area Population}) * 100$
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.5 Social Alignment

The social alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipality aligns with servicing of areas with the highest demand and where the most vulnerable communities are situated.

The social alignment score is calculated within two distinct categories, namely:

- Services; and
- Deprivation Index.

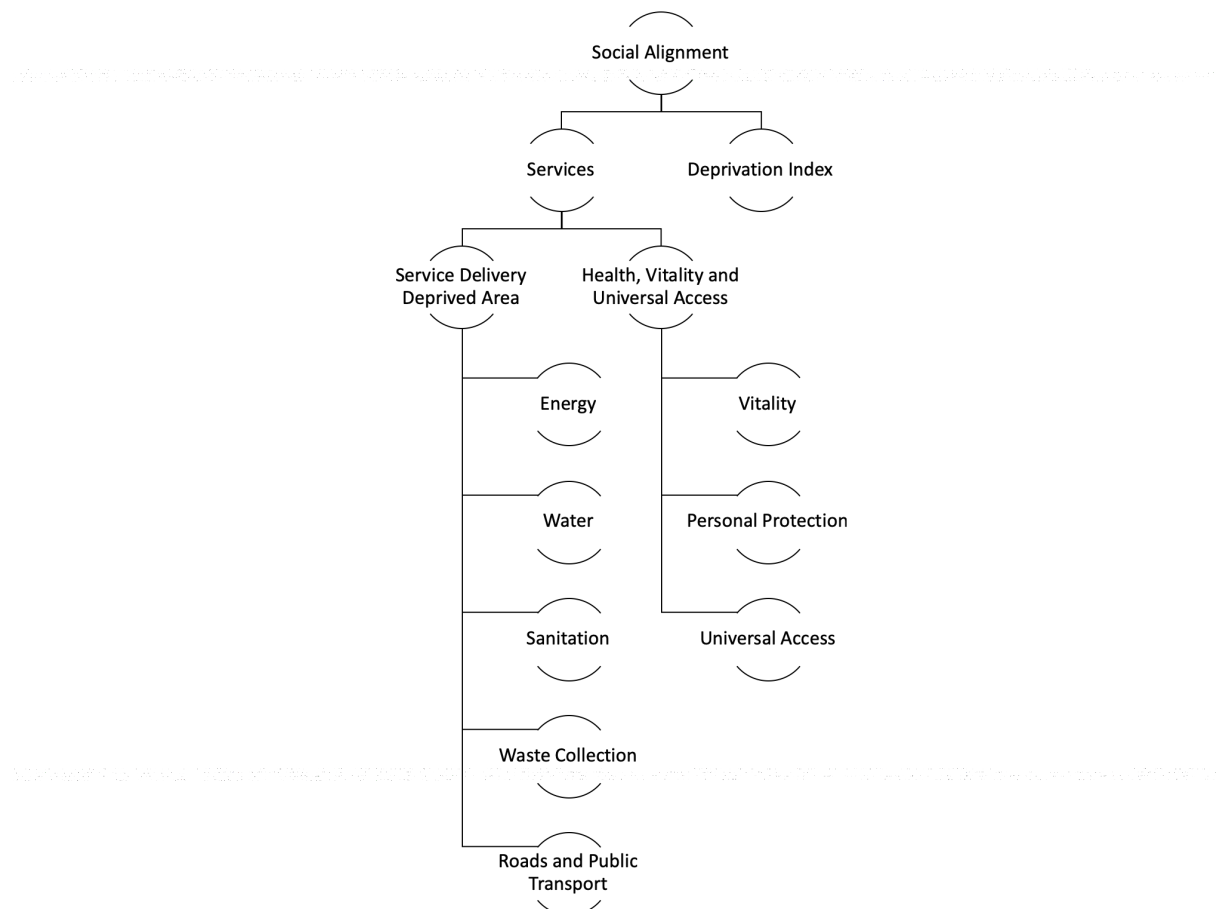


Figure 122: Capital Prioritisation Model: Social Alignment

13.4.5.1 Services

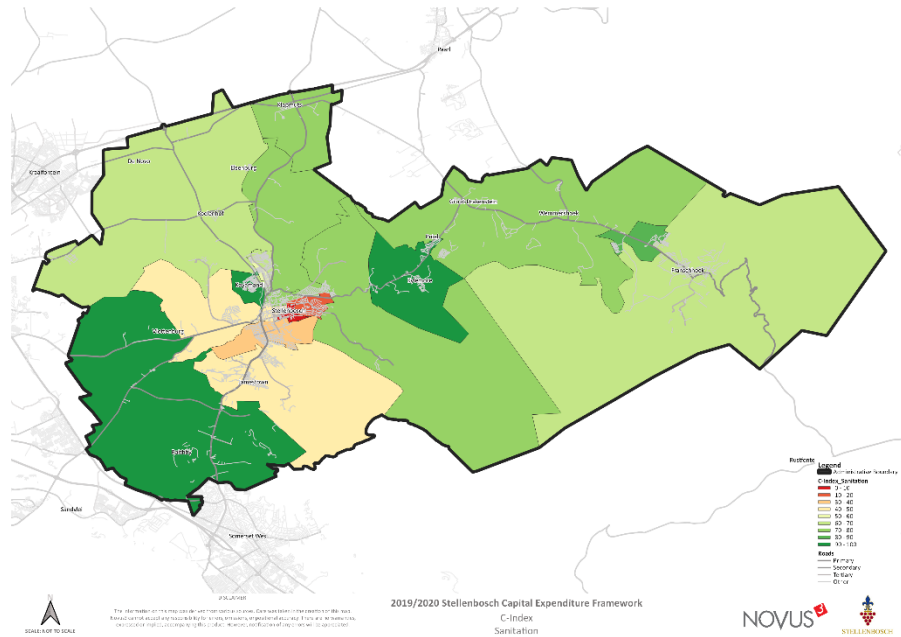
Table 138: Scoring Criteria - Service Delivery Deprived Areas

Category	Description
Definition	Basic Service delivery is one of the most important priorities of local government. Basic services such as Energy, Water, Sanitation, Waste Collection, Roads and Public transport is key in establishing a desired social environment.

Category	Description
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Branch Weight	100
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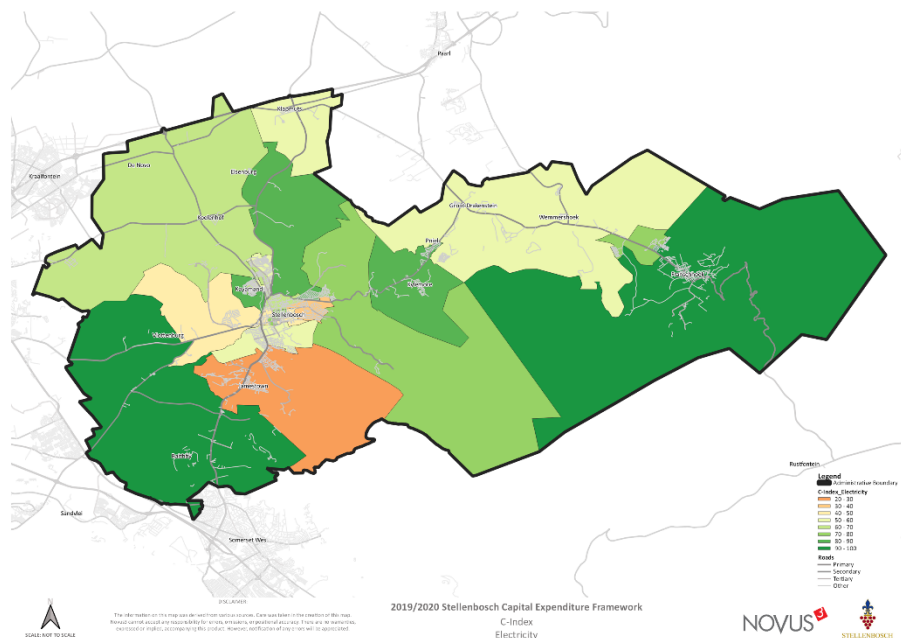
Input Variable



Services within deprived areas are prioritised on this branch.

A combination of Department and service deprived area are used to calculate the score of projects with respect to this branch. The combinations include:

Department of Electrical services + Works location within deprived areas

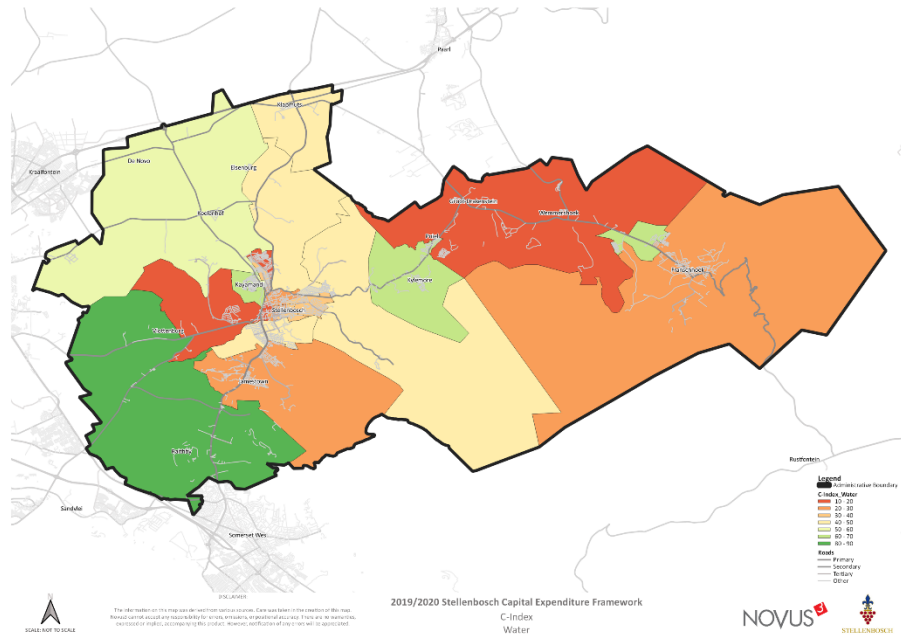


Department of Water and wastewater services + Works location within deprived areas

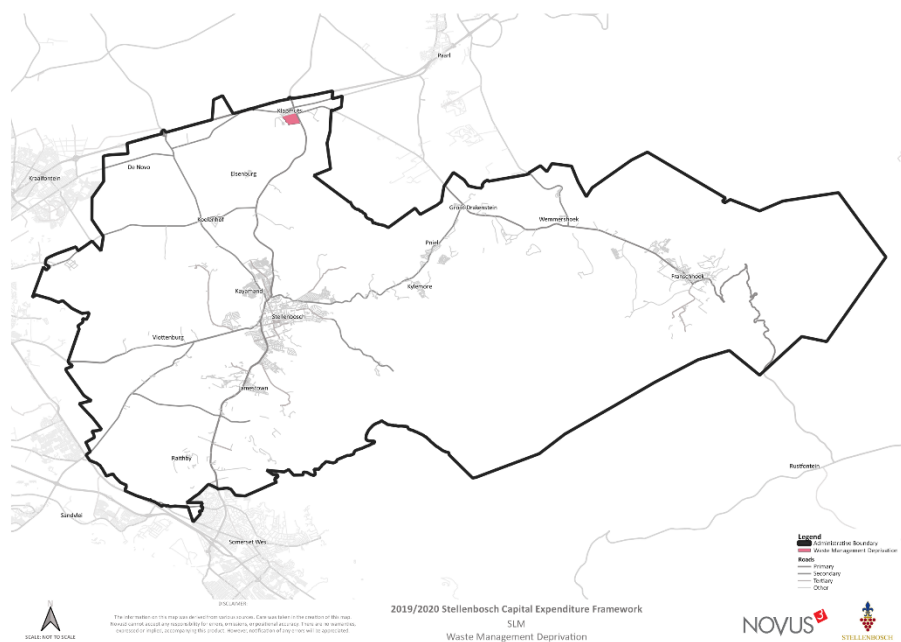
Category

Description

Department of Water and wastewater services + Works location within deprived areas



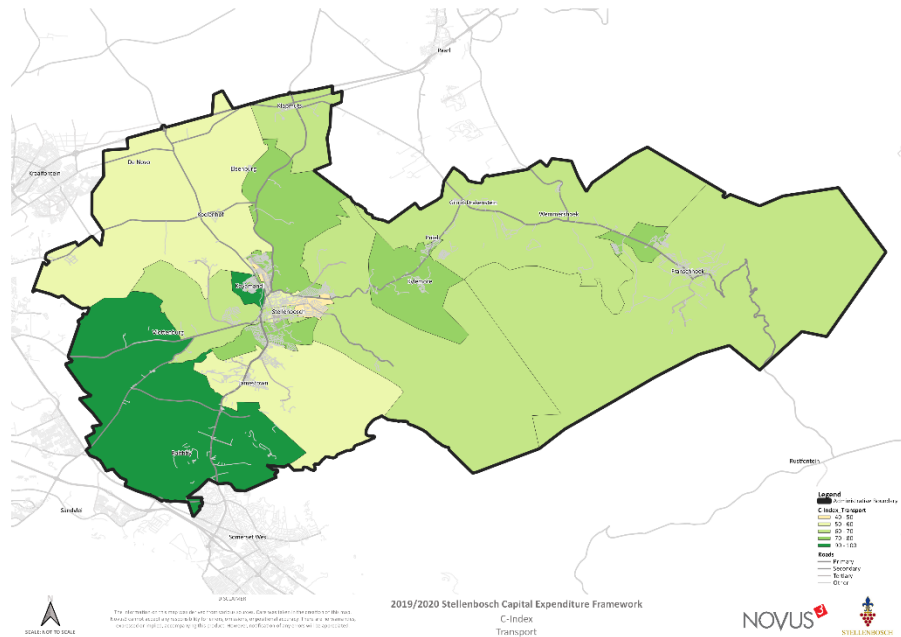
Department of Waste Management: Solid Waste Management + Works location within deprived areas



Department of Roads and Stormwater as well as Transport Planning+ Works location within areas identified as poverty pockets

Category

Description



Process

If a project contributes to one of the sub branches, it scores the maximum available value on this branch.

Mathematical Operator

Maximum value achieved by the project is passed through to the parent scoring branch.

Table 139: Scoring Criteria - Health Vitality and Universal Access

Category

Description

Definition

Health, Vitality and Universal Access focusses on projects that contribute to the socially vulnerable. It specifically focus on departments that are geared towards the upliftment of the socially vulnerable.

Branch Weight

75

Input Variable

Departments:

Water and Wastewater Services: Water

Water and Wastewater Services: Sanitation

Waste Management: Solid Waste Management

Community Safety

Disaster Management

Category	Description
	Fire and Rescue Services
	Law Enforcement and Security
	Traffic Services
	Traffic Engineering
	Portfolios:
	Health
	Universal Access
Process	If a project is owned by the above-mentioned department, and/or falls within the identified portfolios it will be eligible to score on this branch.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.5.2 Deprivation Index

Table 140: Scoring Criteria - Deprivation Index

Category	Description
Definition	<p>Deprivation Index serves to elevate project scores which impact underserved areas as described in the National Treasury Urban Network Structure. The Deprivation Index is a spatial layer calculated from Statistics South Africa data at small area level for the Census 2011, which provides an indication of the level of impoverishment or lack of services across the municipality. The Deprivation Index considers the following indicators:</p> <p>Household Income (25%)</p> <p>Household Size (5%)</p> <p>Household Dwelling Type (5%)</p> <p>Household Cooking (10%)</p> <p>Household Heat (5%)</p> <p>Household Light (5%)</p> <p>Household Piped Water (20%)</p> <p>Household Toilet (20%)</p> <p>Household Refuse Disposal (5%)</p>

Category	Description
Branch Weight	70
Input Variable	Project works location is used as the input to test the deprivation index score of each project based on the deprivation layer or area returned based on the spatial intersect between project works location and deprivation index areas.
Process	The higher the deprivation index value and consequently the level of poverty or lack of access to basic services. Projects with works locations overlapping or intersecting with areas with low levels of service delivery will receive elevated score.
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.6 Technical Alignment

The technical alignment goal or theme of the prioritisation model evaluates the degree to which projects in the municipal capital budget aligns with the asset management plans, analysis and modelling of the technical or utility services departments as well as the sustainability goals of the municipality, and most importantly, whether the project is ready to be implemented (i.e. all statutory and governance requirements have been met).

The technical alignment score is calculated within four distinct categories, namely:

- Implementation readiness;
- Risk Rating;
- Departmental Rating; and
- Legally Bound.

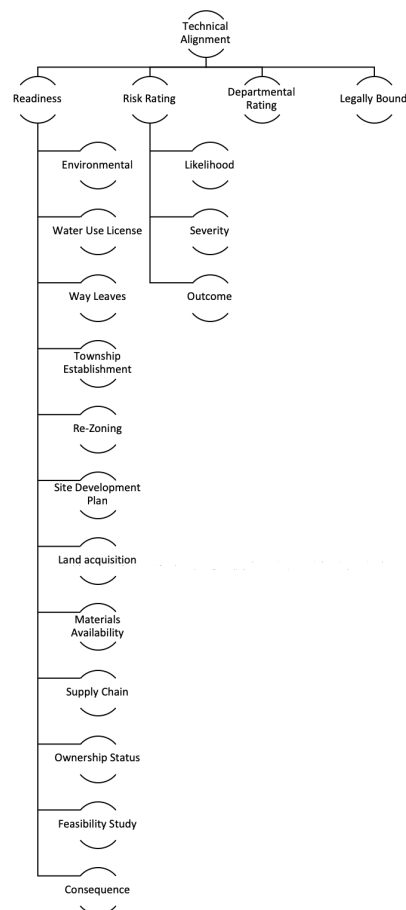


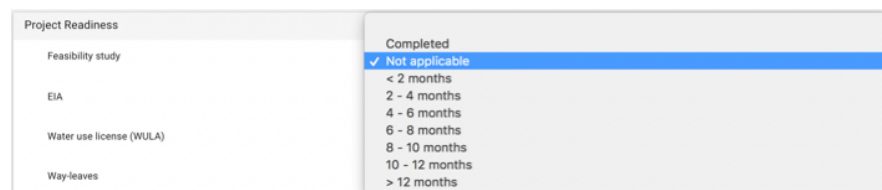
Figure 123: Capital Prioritisation Model: Technical Alignment

13.4.6.1 Implementation readiness

Table 141: Scoring Criteria - Project Readiness

Category	Description
Definition	The project readiness criteria seeks to determine whether a project will be in a position to spend the allocated budget within the financial year in which the budget is requested. In other words, if a project still needs a record of decision on an Environmental Impact Assessment once the project budget has been awarded to the project, it may take between 6-8 months for the record of decision to be finalised. Therefore, the project will only realistically be able to start during the 2 nd or 3 rd quarter of the financial year. Projects with outstanding project readiness criteria are therefore penalised over projects that have all compliance documentation and approvals in place.
Branch Weight	47
Input Variable	<p>A number of project readiness question categories are required to be filled in for each project, namely:</p> <ul style="list-style-type: none"> Feasibility study EIA Water use license (WULA) Way-leaves Township establishment Rezoning Site development plan Land acquisition Ownership status Materials availability Supply chain / procurement Project readiness comment / motivation Geotechnical Study <p>Evidence of completion or compliance to any of these project readiness categories required documentation to be uploaded to the system as proof.</p>

Category	Description
Process	<p>The readiness score of a project is calculated as the minimum score achieved across all project readiness questions. Each of the project readiness categories allow for a standard set of responses, namely:</p> <p>Duration of time to meet compliance: < 2 months = 100</p> <p>Duration of time to meet compliance: 2 - 4 months = 90</p> <p>Duration of time to meet compliance: 4 - 6 months = 80</p> <p>Duration of time to meet compliance: 6 - 8 months = 50</p> <p>Duration of time to meet compliance: 8 - 10 months = 30</p> <p>Duration of time to meet compliance: 10 - 12 months = 10</p> <p>Duration of time to meet compliance: > 12 months = 0</p> <p>Duration of time to meet compliance: Completed = 100</p> <p>Duration of time to meet compliance: Not applicable = 100</p> <p>An example of the question categories and drop-down selections on the system is shown below:</p>



Mathematical Operator	Minimum value achieved by the project achieved across all branches is passed through to the parent scoring branch. This is because project readiness is a compliance or governance test, so if for example and EIA is still required, the score of the project should be penalised, hence the minimum value is carried over.
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13.4.6.2 Risk Rating

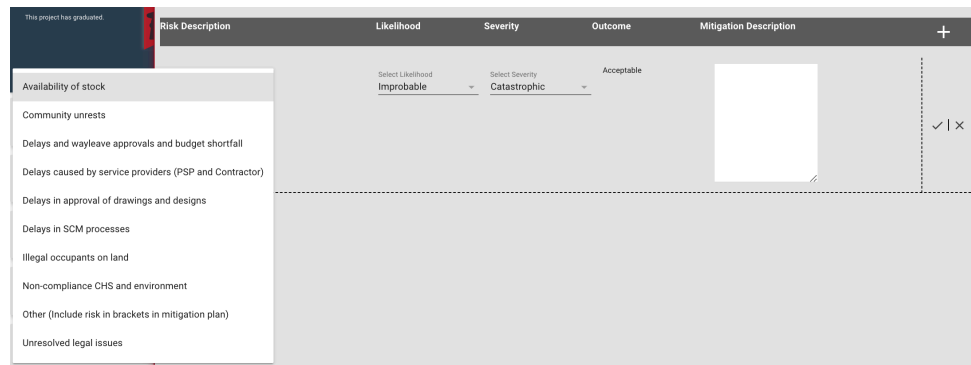
Table 142: Scoring Criteria - Risk Rating

Category	Description
Definition	Risk management is an important aspect of capital planning. Understanding the risk mitigated by a project lead to a better understanding of a project and its relevance to the municipality. By considering a likelihood criteria – ranging from

Category	Description
	improbable to frequent – and a severity index – ranging from negligible to catastrophic – it is possible to identify the outcome should a project not be implemented.

Branch Weight 6

Input Variable



Process Once a risk and his likelihood and severity has been determined, an outcome is derived which carries a weighting on this branch. A project that qualifies for a specific outcome will be assigned that specific value.

Mathematical Operator Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.6.3 Departmental Rating

Table 143: Scoring Criteria - Departmental Rating

Category	Description
Definition	The departmental rating incorporates the relative importance bestowed on each project by the originating department. A score out of 100 is asked and can be entered by means of a slider. Departments that do not introduce enough variability in their department's project scores are penalised somewhat. This is to prevent that a department marking all their projects as "100" or critical does not get an unfair advantage over departments that rates their projects honestly (i.e. numerous project scores ranging from 0 to 100).
Branch Weight	47
Input Variable	The department technical rating is captured using a project priority rating slider for each project on the technical section of the project capturing screen.

Category	Description
	<div> <div>System no</div> <div>Project name</div> <div>Scope Description</div> <div>Description</div> <div>Technical Priority</div> </div> <div> <div>Cemeteries Beautification of Open Spaces In Graveyards</div> <div>Renewal Existing Non-Infrastructure CapitalAsset: Community Assets Community Facilities Cemeteries/Crematoria</div> <div>description</div> <div> <div>Very Low</div> <div>Low</div> <div>Moderate</div> <div>High</div> <div>Urgent</div> <div>Critical</div> </div> </div>

Process The departmental rating score is a normalised score per project based on the range between the department's minimum project rating and maximum project rating. The above calculation is expressed by the following mathematical equation:

$$Y_{project} = \left(\frac{(TPR_{project} - TPR_{Dept\ min})}{(TPR_{dept\ max} - TPR_{Dept\ min})} \right) \times \left(\frac{(TPR_{Dept\ Max} - TPR_{Dept\ min})}{(TPR_{dept\ max})} \right) \times 100$$

Where:

Y = project score

TPR = Technical priority rating (between 0 and 100)

Dept_Min = lowest department project technical rating

Dept_Max = highest department project technical rating

Mathematical Operator Maximum value achieved by the project is passed through to the parent scoring branch.

13.4.6.4 Legally Bound

Table 144: Scoring Criteria - Legally Bound

Category	Description
Definition	Projects that originate from some sort of legal obligation are being prioritised due to the negative downstream impact of not implementing such projects.
Branch Weight	100
Input Variable	<p>Project owners must indicate whether a project has any legal obligation.</p> <div> <div>No Selection</div> <div>No</div> <div>Yes - No timeframe specified</div> <div>Yes - Next financial year</div> <div>Yes - This financial year</div> </div>
Process	If a project is related to any legal obligation, then it will be eligible to score on this branch of the scoring model.

Category	Description
Mathematical Operator	Maximum value achieved by the project is passed through to the parent scoring branch.

13.5 Annexure 5: Long Term Financial Strategy Scenario's

Annexure 5: LTFS Scenarios'

Based on the results of the Long Term Financial Model and the high levels of utilisation of own cash resources to fund capital expenditure noted over the MTREF period, and in light of the current budget cycle of the municipality, the following proposals are made regarding changes to capital expenditure and capital funding mix over the next two years (FY2020 and FY2021):

- A decrease in the capital expenditure of FY2020 to R 375 million (from the R468 million in the MTREF), increasing the capital expenditure of FY2021 to R 385 million (from the R 352 million in the MTREF)
- An increase in external borrowings in FY2020, from the R 100 million in the current MTREF to R 180 million and in FY2021 from the R 80 million in the current MTREF to R 180 million.

These amendments will impact positively on the financial sustainability of Stellenbosch, while increasing the total affordable capital expenditure to R 4,327 million over the forecast period.

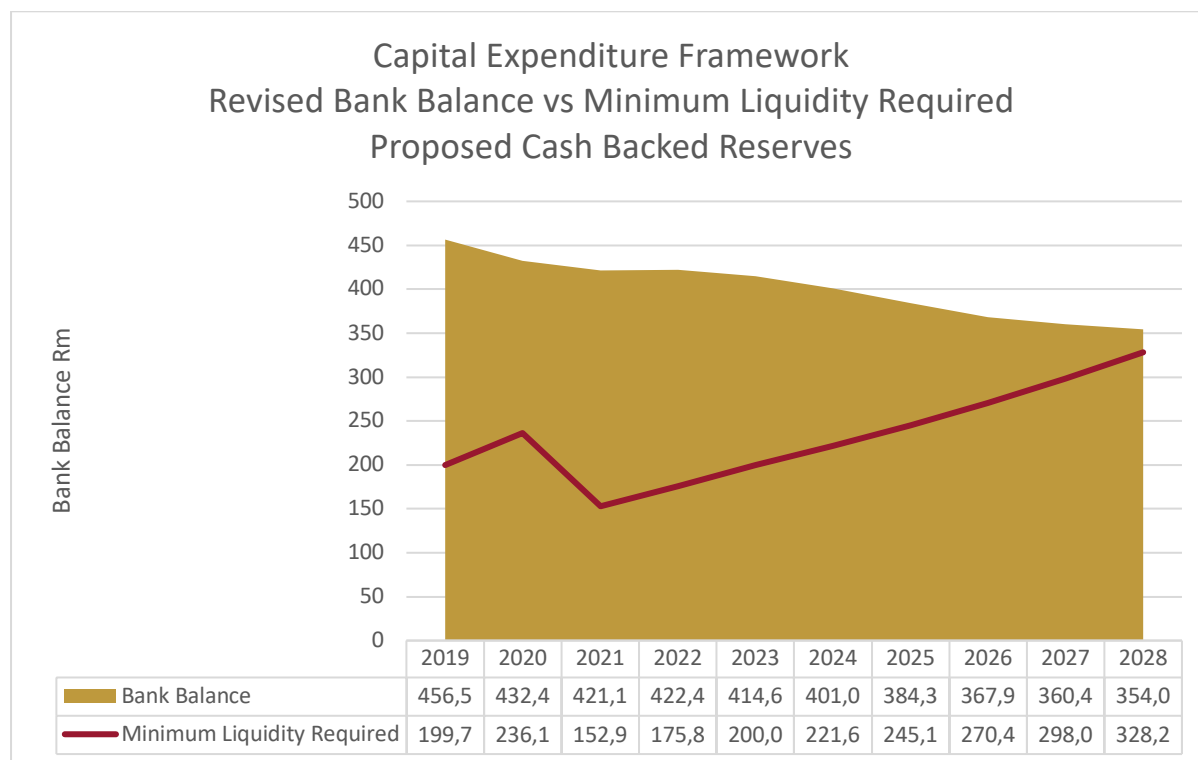


Figure 124: Revised Bank Balance vs Minimum Liquidity Required

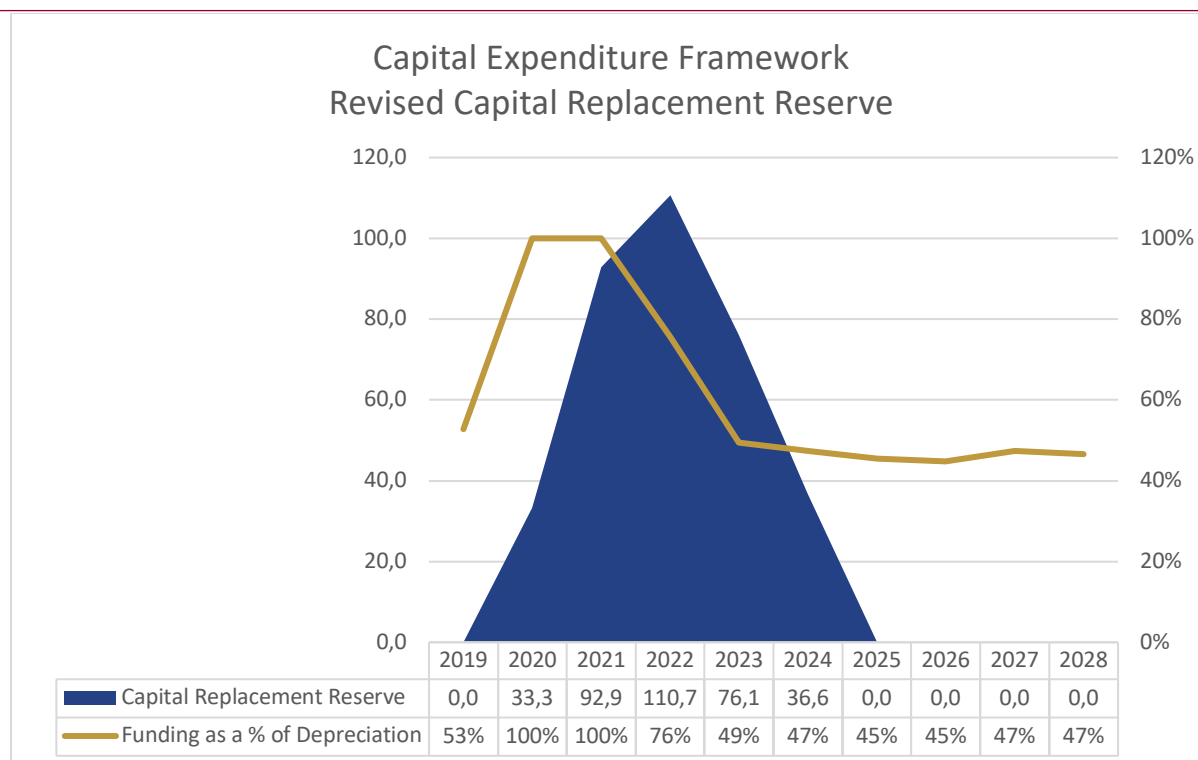


Figure 125: Revised Capital Replacement Reserve

The revised liquidity levels exceed the minimum statutory requirements over the entire forecast period and excess cash in the earlier years allow for the funding of a capital replacement reserve.

The higher debt levels, although breaching the 35% gearing benchmark which requires a policy review by Stellenbosch, never exceeds 45% gearing which is regarded as the maximum municipal norm. A decrease in gearing is noted at the end of the forecast period. Debt service levels remain below 9% and is considered affordable.

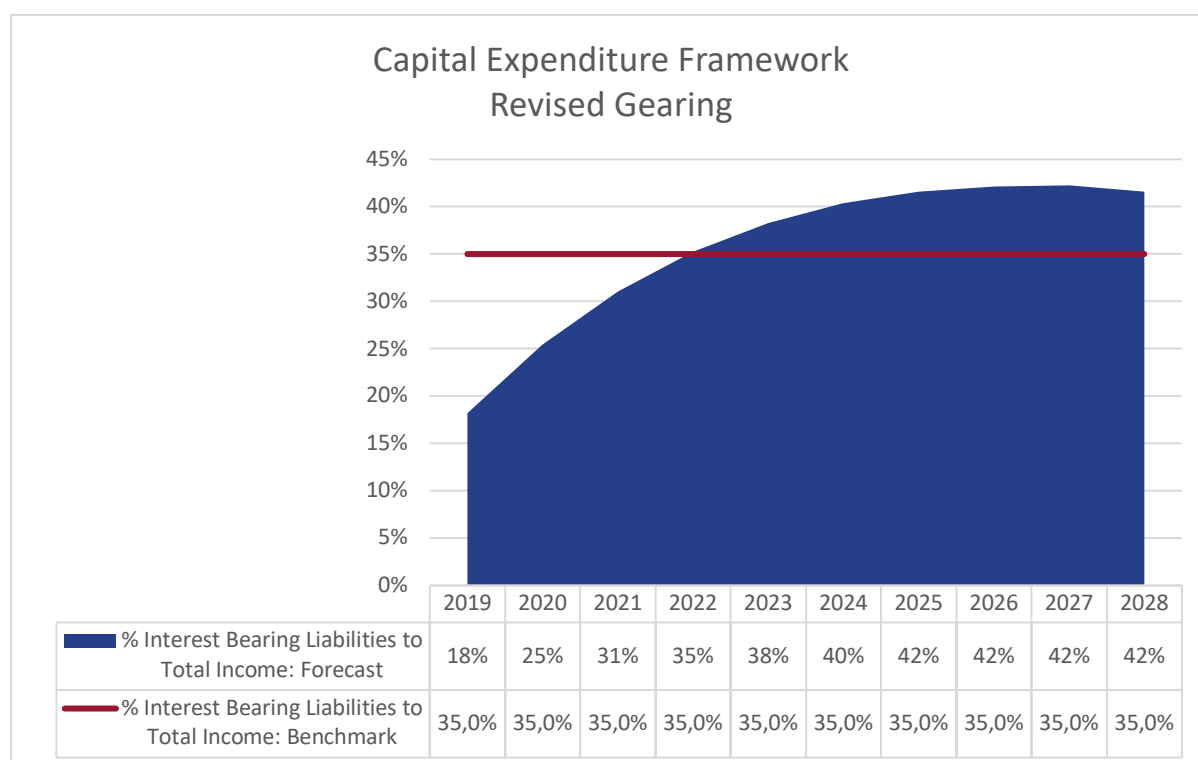


Figure 126: Revised Gearing

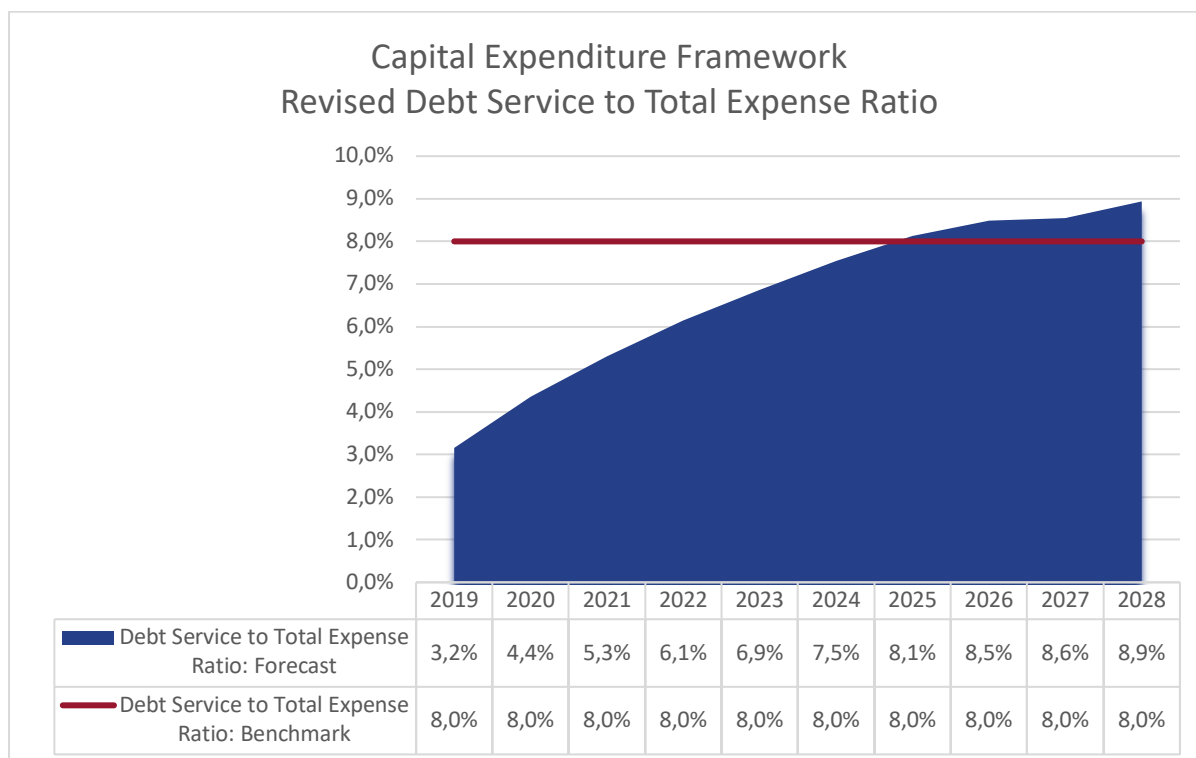


Figure 127: Revised Debt Service to Total Expense Ratio

The amended levels of capital expenditure and proposed funding mix, addresses the apital spending patterns seen in historical years and provides consistency and predictability, which would positively impact on policy certainty and provide comfort to investors and key stakeholders of the municipality.

The levels of affordable capital expenditure and optimal borrowing, considering these proposed amendments, are provided below.

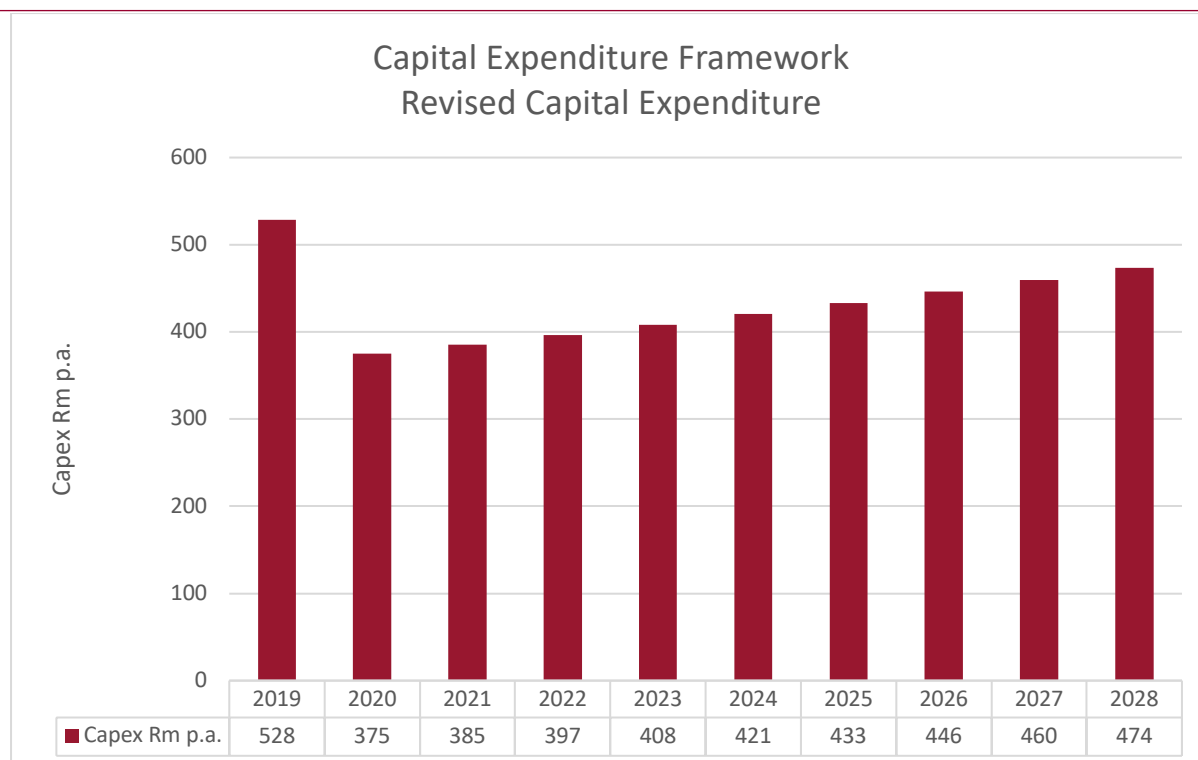


Figure 128: Revised Capital Expenditure

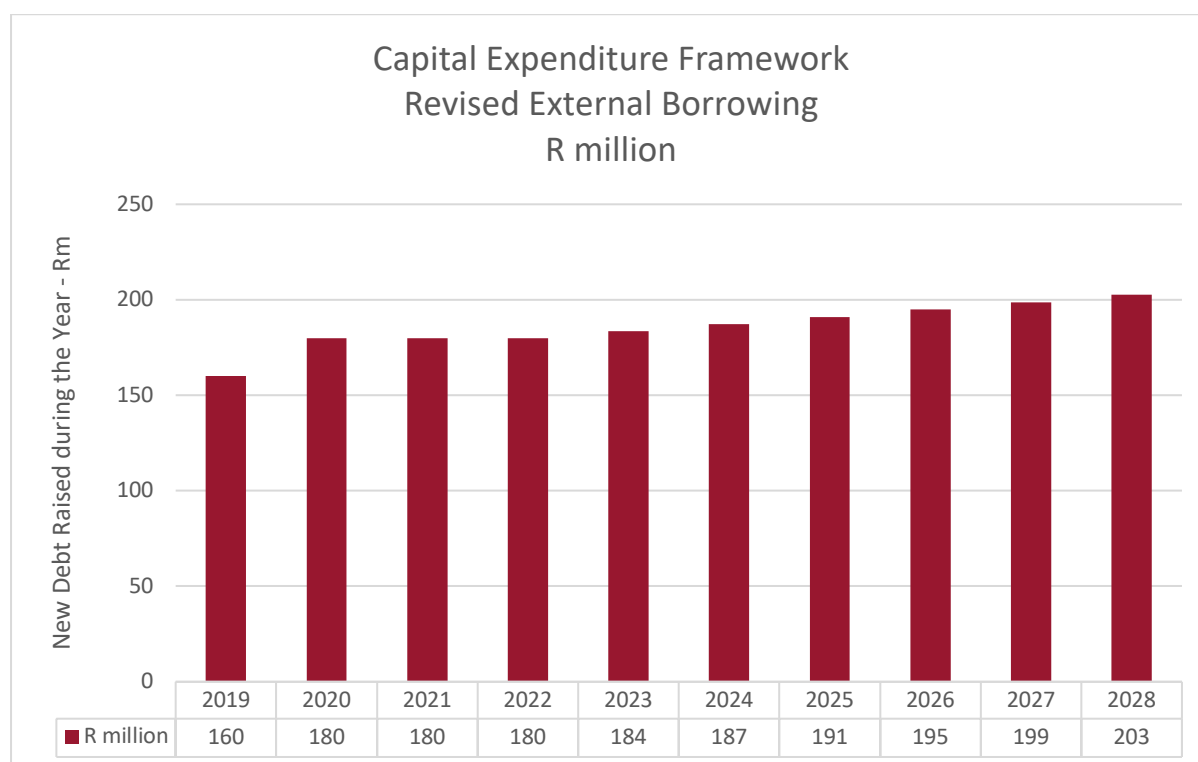


Figure 129: Revised External Borrowing

A summary of the forecast capital funding mix is provided below:

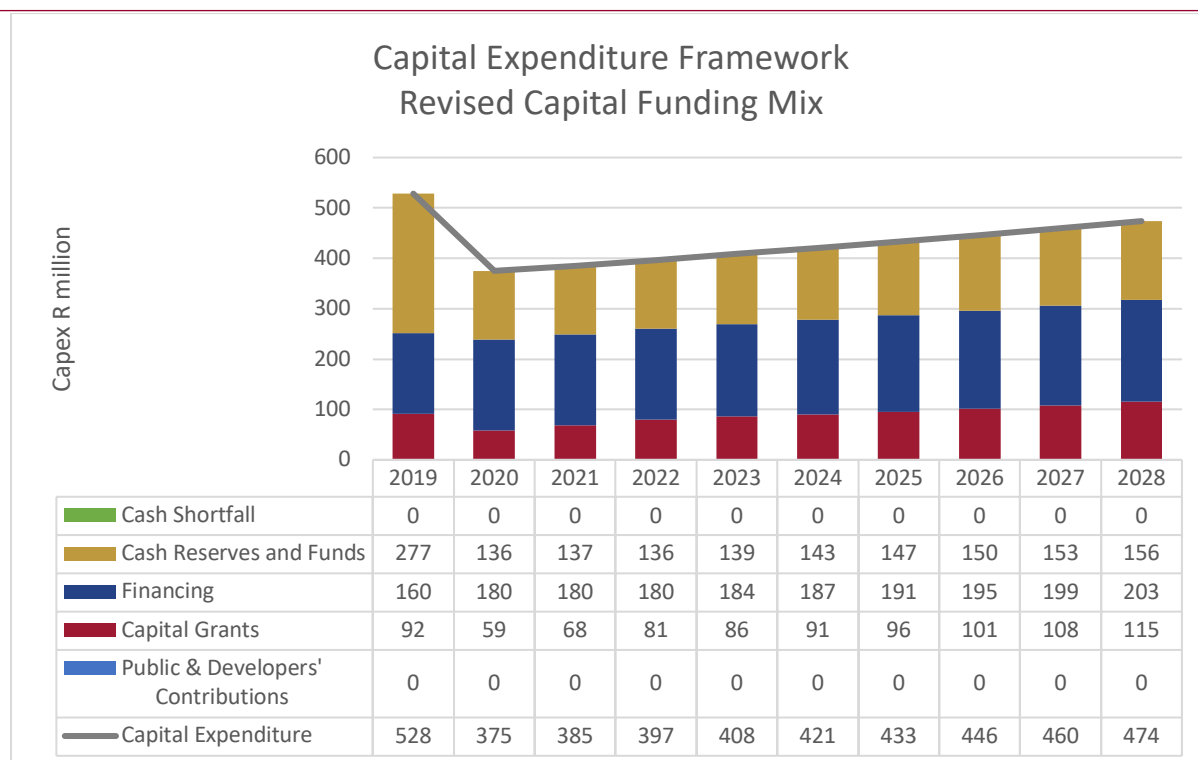


Figure 130: Revised Capital Funding Mix

Section 14 Bibliography



14 Bibliography

Sections of this report is based on queries generated from the MapAble® database (www.mapable.co.za). The data sources are indicated in the table below. All the data utilised is in the public domain and can be sourced from the respective data custodians.

The bulk of the data comes from census data from Statistics South Africa. Each census is queried at the smallest data level at which a census was released. The 1996 census was released at enumerator area (EA) level while the 2001 census was only released at sub-place level. A sub place consists of a number of EAs. The 2011 census was released as a small area layer (SAL). Small areas are larger than EA's but smaller than sub-places. It is important to note that the censuses are not consistent insofar as data categories are concerned. It was therefore necessary to adjust some census data (subdividing categories or lumping categories together) in order to get the data at a consistent and comparable basis. Due to the way data is extracted from the census the totals in the tables in the report are not necessarily consistent or the same throughout the report. The following affects table totals:

- When data is extracted from the censuses, values of less than 5 are randomised with values between 1 and 5 in order to protect individual's identities. This accounts for smaller variations in totals;
- Data categories are not consistent between the censuses; and
- The process of data partitioning is by its very nature affected by the physical scale at which queries are done. The smaller an area is the bigger the possibility for anomalies become.

Notwithstanding these issues, the results are valid and sufficiently accurate for general use.

Data partitioning is used in MapAble® to determine values for the selected areas. Data partitioning calculates the proportional ratios of underlying data sets (data linked to polygons such as EA's or sub-places) within a selected query area (ward, municipality, farm portion, etc.). Data partitioning is used to overcome the need for information on census demographics for areas that are not consistent with the standard boundaries themselves, or as the case in this report, where boundaries change from time to time and area profiles are not directly comparable. The proportions are based on the area of the intersecting themes.

Data partitioning allows for comparisons between datasets, which each having their own unique demarcations, and data that is not necessarily spatially comparable or compatible.

Data table	Data source
The area's demarcation history	Municipal Demarcation Board from 1996 to 2016
Smaller towns, settlements and villages	MapAble® 2015
Population and gender	Statistics South Africa. Census data for 1996, 2001 and 2011
Population groups	Statistics South Africa. Census data for 1996, 2001 and 2011
Age groups	Statistics South Africa. Census data for 1996, 2001 and 2011
Language groups	Statistics South Africa. Census data for 1996, 2001 and 2011
Total households, size and density	Statistics South Africa. Census data for 1996, 2001 and 2011
Dwelling frame 2018	Statistics South Africa 2018
Head of household by gender	Statistics South Africa. Census data for 1996, 2001 and 2011
Household income per month in 2011 Rand values	Calculated by MapAble® from census data 2016
Household income indicators per month in 2011 Rand values	Calculated by MapAble® from census data 2016
Dwelling type	Statistics South Africa. Census data for 1996, 2001 and 2011

Data table	Data source
Dwelling ownership	Statistics South Africa. Census data for 1996, 2001 and 2011
Migration - country of origin	Statistics South Africa. Census data for 1996, 2001 and 2011
Province of previous residence	Statistics South Africa. Census data for 1996, 2001 and 2011
Highest level of education	Statistics South Africa. Census data for 1996, 2001 and 2011
Employment within the area	Statistics South Africa. Census data for 1996, 2001 and 2011
Primary schools' statistics within the area	Department of Basic Education 2016
Secondary schools' statistics within the area	Department of Basic Education 2016
Intermediate schools' statistics within the area	Department of Basic Education 2016
Combined schools' statistics within the area	Department of Basic Education 2016
List of public health facilities within the area	Department of Health 2015
Private health facility and ownership within the area	Department of Health 2015
Number of beds per facility within the area	Department of Health 2015
Police stations	South African Police Services 2015
Area covered by SAPS precincts	Institute for Security Studies as calculated by Mandala GIS 2015
Lower courts in the area	Department of Justice mapped by MapAble
Land cover 1990 and 2014: Natural elements	GeoTerralimage (Pty) Ltd 2014
Land cover 1990 and 2014: Primary economic activities	GeoTerralimage (Pty) Ltd 2014
Land cover 1990 and 2014: Human settlement	GeoTerralimage (Pty) Ltd 2014
Access to water services 1996, 2001 and 2011	Statistics South Africa. Census data for 1996, 2001 and 2011
Access to sanitation services 1996, 2001 and 2011	Statistics South Africa. Census data for 1996, 2001 and 2011
Access to electricity services 1996, 2001 and 2011	Statistics South Africa. Census data for 1996, 2001 and 2011
Access to refuse removal services 1996, 2001 and 2011	Statistics South Africa. Census data for 1996, 2001 and 2011
Road services in the area	Calculated by MapAble® from various sources 2016

A scenic landscape photograph. In the foreground, there is a vineyard with rows of grapevines that have some reddish-brown leaves. A dirt road winds through a valley in the middle ground, flanked by green fields and some trees. In the background, there are large, rugged mountains under a clear blue sky. The text "End of Document" is overlaid in the center of the image.

End of Document