

**7.6**

**INFRASTRUCTURE**

**CLLR J DE VILLIERS**

7.6	INFRASTRUCTURE: [CLLR J DE VILLIERS]
7.6.1	PLANNING OF AN INTEGRATED PUBLIC TRANSPORT SERVICE NETWORK AND THE PROVINCIAL PUBLIC TRANSPORT INSTITUTIONAL FRAMEWORK

### 1. PURPOSE OF REPORT

To inform Council of the signing of a memorandum of agreement with the Western Cape Department of Transport and Public Works.

### 2. BACKGROUND

The Stellenbosch Municipality compiled a Comprehensive Integrated Transport Plan (CITP) which was approved by Council on 30 March 2016 (**APPENDIX 1**). The document was submitted to the MEC for approval as required in terms of the National Land Transport Act (**APPENDIX 2**). The CITP in Chapter 6 refers to the preparation of an Integrated Public Transport Network Plan (IPTN) and recommends the municipality apply for a Public Transport Network Grant (**APPENDIX 3**). The municipality has engaged with the Department of Transport and Integrated Planning in this regard and a Memorandum of Agreement (**APPENDIX 4**) was signed to guide and direct future engagement in support of its application for the Public Transport Network Grant.

The Province will through its Provincial Public Transport Institutional Framework assist the municipality with the development of an IPTN.

### 3. DISCUSSION

**The purpose of the Provincial Public Transport Institutional Framework is to:**

- Assist municipalities in accessing finance and technical resources for the Development and implementation of the Public Transport Network.
- Ensure a uniform approach of addressing public transport issues throughout the province.
- Address capacity constraints at municipal level.

The Stellenbosch municipal CBD is experiencing severe traffic congestion as a result of the limited space for widening of roads and provision of additional parking. Almost 50% of the trips attracted to the Stellenbosch CBD come from outside of Stellenbosch, resulting in the abnormal congested situation. The Western Cape Government acknowledged this reality and prioritised Stellenbosch as the first town in the Western Cape to assist under the PPTIF with the implementation of the Public Transport Network. The signing of a memorandum of agreement is the first step in the process to have access to this financial and institutional support from Province. This signed Memorandum of Agreement will pave the way for the implementation of the recommendations of the approved CITP.

### 4. FINANCIAL IMPLICATIONS

The entire funding for the planning design and implementation will be provided by Province. In subsequent years, Stellenbosch Municipality may

budget for items in the process which might not be covered or included in Province's funding.

## 5. COMMENTS FROM DIRECTORATES

### 5.1 Director: Public Safety & Community Services

The Directorate: Public Safety and Community Services supports the cooperation agreement between Stellenbosch Municipality and the Provincial Government Western Cape's Department of Transport and Public Works.

### 5.2 Director: Planning & Economic Development

The Directorate Planning & Economic Development supports the cooperation agreement between Stellenbosch Municipality and Provincial Government Western Cape's Department of Transport and Public Works.

### 5.3 Director: Strategic & Corporate Services (Legal Services – Ms E Rhoda)

Supported. The CITP was already approved by Council on 30/3/2016 which supports the development of the Integrated Public Transport Network (IPTN).

### 5.4 Director: Financial Services

The Directorate: Financial Services supports the cooperation agreement between Stellenbosch Municipality and Provincial Government Western Cape's Department of Transport and Public Works.

## RECOMMENDED

that the attached signed Memorandum of Agreement (**APPENDIX 4**) for Stellenbosch Municipality's participation in the PPTIF and the subsequent development of the IPTN, as it is aligned with the approved Comprehensive Integrated Transport Plan, **be noted**.

<b>Meeting: Ref No:</b>	4 <sup>th</sup> Council: 2016-11-23 8/1 Engineering	<b>Submitted by Directorate: Author: Referred from:</b>	Infrastructure W Pretorius Mayco: 2016-11-16
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**7.6.1**

**PLANNING OF AN INTEGRATED PUBLIC  
TRANSPORT SERVICE NETWORK AND  
THE PROVINCIAL PUBLIC TRANSPORT  
INSTITUTIONAL FRAMEWORK**

**APPENDIX 1**

Appendix 1:**8. CONSIDERATION OF MATTERS REFERRED TO COUNCIL VIA THE MAYORAL COMMITTEE MEETING/S****8.1 DEVELOPMENT OF A COMPREHENSIVE INTEGRATED TRANSPORT PLAN (CITP) FOR THE MUNICIPAL AREA**

*File number* : 17/9/2/2

*Report by* : *Acting Director: Engineering Services*

*Compiled by* : *Acting Head: Transport Planning and Public Transport*

*Delegated authority* : *Council*

***Strategic intent of item***

Preferred investment destination	<input checked="" type="checkbox"/>
Greenest municipality	<input checked="" type="checkbox"/>
Safest valley	<input checked="" type="checkbox"/>
Dignified Living	<input checked="" type="checkbox"/>
Good Governance	<input checked="" type="checkbox"/>

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**1. PURPOSE OF REPORT**

To obtain endorsement of the Comprehensive Integrated Transport Plan from Council for submission of the plan to the Department of Transport and Public Works. Attached as **APPENDIX 1** is the executive summary and table of contents of the CITP.

**2. BACKGROUND**

In terms of the Government Notice No R 1119 a Type 1 Planning Authority is required to prepare a Comprehensive Integrated Transport (CITP). This Plan must be prepared with due regard to the relevant Integrated Development Plan and land development objectives set in terms of the Development Facilitation Act.

The CITP for Stellenbosch Municipality will consist of the following chapters as specified in the Government Notice:

1. Introduction
2. Transport Vision & Objectives
3. Transport Register

4. Spatial Development Framework
5. Transport Needs Assessment
6. Public Transport Operational Strategy
7. Transport Infrastructure Strategy
8. Travel Demand Measures
9. Freight Logistics Strategy
10. Other Transport Related Strategies
11. Funding Strategy of Proposals and Programmes

The attached executive summary briefly outlines each of the above chapters and the table of contents shows the headings dealt with under each.

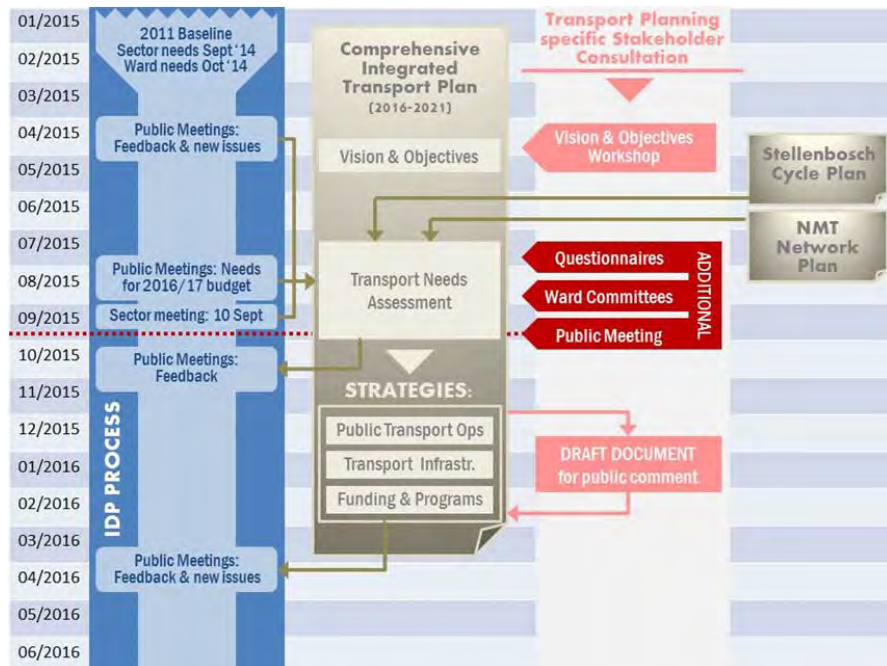
### **3. DISCUSSION**

#### **The Purpose of the CITP is to:**

- Giving structure to the function of municipal planning mentioned in Part B of Schedule 4 of the Constitution.
- Fostering integration between land development and land use planning.
- Forming an essential part of the Integrated Development Plan of the Municipality
- Giving effect to national and provincial transport strategies and policies.
- Providing plans and strategies for the improvement of transport infrastructure and systems to foster economic and social growth and to improve the quality of life of the residents in the Municipality.

#### **3.1 PUBLIC PARTICIPATION**

Public Participation is essential to the successful development of the CITP. The diagram below shows an outline of the public participation process that was followed:



As shown above, an extensive effort to obtain wide participation was followed. It included:

- Collaboration with the IDP process to ensure that inputs received during the IDP's public participation also flow through into the CITP.
- Stakeholder organisations such as the Chamber of Commerce and the Disability Association and others were involved through the Transport Working Group who held a special CITP Vision and Mission Workshop, and received progress at their quarterly meetings.
- Ward Committees were briefed at their meeting on 28 July 2015.
- A public meeting specifically on Transport Planning was widely advertised in various newspapers and was held on 15 October 2015 in the Town Hall.
- Snap Surveys was distributed throughout the Municipal Area. Ward committees assisted with this effort. Interviewers were also sent to wards to ensure that all communities had an opportunity to participate. A total of 512 responses were received.
- A workshop on the key issues of the CITP was held with Council on 23 November 2015.
- Following the above efforts, those members of the public who indicated their interest in participating in the CITP process by attending the public meeting on 15 October 2015 as well as the organisations involved through the Transport Working

Group had an opportunity to comment on the draft CITP before it was finalised for the Portfolio Committee, MAYCO and Council. The input received and the Project teams response is tabled in **APPENDIX 2**.

The snap surveys identified the following three CITP focus areas:

- Implement a local scheduled public transport service (52.5%)
- Build new roads to provide alternative routes and relieve congestion (45.7%)
- Create more parking in the Stellenbosch CBD (39.8%)

### **3.2 KEY ISSUES**

The CITP's key principles are:

- Promote development and growth to create jobs
- Link communities to social and economic nodes
- Economic and environmental sustainability

The following priorities are highlighted in the CITP document:

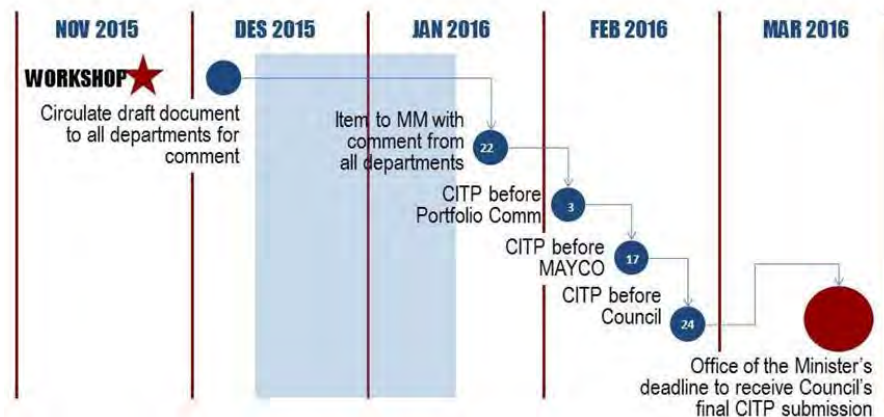
- The provision of a high quality, sustainable public transport network
- Improved accessibility to transport for learners and persons with disabilities
- The improvement of facilities for pedestrians and non-motorised transport in Stellenbosch as well as the surrounding, smaller settlements and rural areas
- The need to improve mobility on the major road network by reducing congestion and the provision of alternative routes and corridors
- The need to identify and source additional funding to implement projects included in the CITP.

### **3.3 WAY FORWARD**

With regards to public Transport, the Integrated Public Transport Network (IPTN) - a separate legislative requirement – will be completed by June 2016 and will provide more detail on the way forward for public transport in the municipal area.

The diagram below shows the timeline for submitting the CITP to the Western Cape Department of Transport and Public Works by their deadline at the end of the provincial financial year in March 2016.





#### 4. FINANCIAL IMPLICATIONS

Various projects with budgets are identified in the CITP as expounded in Section 12 of the document. These projects and budgets will be used as inputs in the municipal budgeting process during the next 5 years.

#### 5. COMMENTS FROM DIRECTORATES

##### 5.1 Director: Public Safety & Community Services

No comments received

##### 5.2 Director: Planning & Economic Development

No comments received

##### 5.3 Director: Strategic & Corporate Services (Legal Services)

No comments received

##### 5.4 Director: Financial Services

Finance supports the Item. Implementation will be budget dependent. Public Private Partnerships could possibly also be explored to implement; finance and management some of the projects

##### 5.5 Director: Housing & Property Management

No comments received.

#### RECOMMENDED

that the Comprehensive Integrated Transport Plan (CITP) be endorsed for submission to the MEC of Transport for approval.

**(ACTING DIRECTOR: ENGINEERING SERVICES TO ACTION)**

**ENGINEERING SERVICES AND HUMAN SETTLEMENTS COMMITTEE  
MEETING: 2016-03-02: ITEM 6.1.2**

**RESOLVED** (nem con)

that the Manager: Transport and Roads & Stormwater provides the required additional information with regard to the Transport Plan for submission to the Mayoral Committee and Council.

**RECOMMENDED**

that the Comprehensive Integrated Transport Plan (CITP) be endorsed for submission to the MEC of Transport for approval.

**(ACTING DIRECTOR: ENGINEERING SERVICES TO ACTION)**

**& FURTHER COMMENTS BY THE MANAGER: TRANSPORT AND ROADS  
STORMWATER**

The Comprehensive Integrated Transport Plan (CITP) does not specifically mention the lack of a fence along the railway line from du Toit Station to Koelenhof Station through the urban area as a concern. It is proposed that the section on Public Transport Safety and Security in the CITP be expanded to include this need.

The CITP was compiled with the 2013 Spatial Development Framework (SDF) as basis, and therefore does not specifically cater for the Northern Extension Project. The CITP does however address the need for a Transit-Orientated Development (TOD) node at Kayamandi, the Western bypass feasibility and the upgrade of the R304. All these projects will be triggered and supported by the Northern Extension Project.

**FOR CONSIDERATION**

**MAYORAL COMMITTEE MEETING: 2016-03-23: ITEM 5.1.4**

The following comments from the various Directorates were received:

**Director: Planning & Economic Development**

The item as well as the Comprehensive Integrated Transport Plan are supported.

**Director: Strategic & Corporate Services (Legal Services)**

The item is supported. The complete CITP is to be made available for Council scheduled for 2016-03-30.

**Director Public Safety and Community Services**

The item as well as the Comprehensive Integrated Transport Plan are supported. The Directorate was instrumental in compiling the Intergrated Transport Plan which includes all comments, views and future Traffic Law Enforcement strategies for the Greater Stellenbosch.

### **Director: Housing & Property Management**

#### **1. Taxi Rank in Kayamandi**

Although the Bergzicht Taxi Rank does provide for taxi's from Kayamandi, there are no formal, dedicated taxi rank in Kayamandi. It is critical that a formal taxi rank(s) be constructed in Kayamandi.

#### **2. Taxi permits: Travel between Franschhoek and Stellenbosch**

At the moment the taxi permits does not take note of the new municipal area, i.e. travel between Franschhoek and Stellenbosch. For this reason people must travel to Pniel, then move over to another taxi to take them to Stellenbosch.

No formal taxi rank/"*transfer station*" is provided in Pniel. Taxi permits should be reconsidered to cater for a non-stop service between Franschhoek and Stellenbosch.

#### **3. Obligation on housing projects to cater for upgrade of road infrastructure**

When low-cost housing projects are planned, it is expected from housing projects to attend to upgrade of road infrastructure, at the cost of the municipality. This puts extra pressure on the municipality/project.

Seeing that housing is a provincial function, the provincial government should take more responsibility in the upgrade of roads infrastructure when it comes to low cost housing projects (e.g Longlands development delayed for almost 5 years due to access issues).

### **RECOMMENDED BY THE EXECUTIVE MAYOR**

- (a) that the Comprehensive Integrated Transport Plan (CITP) be endorsed for submission to the MEC of Transport for approval;
- (b) that the section on Public Transport Safety and Security in the Comprehensive Integrated Transport Plan include the need to address the safety considerations for residents living along the railway line between du Toit Station and Koelenhof Station; and
- (c) that cognisance be taken of the matter relating to School Street, Jamestown, and that further engagement on said matter take place with the MEC for Local Government.

**(ACTING DIRECTOR: ENGINEERING SERVICES TO ACTION)**

**39<sup>TH</sup> COUNCIL MEETING: 2016-03-30: ITEM 8.1**

**RESOLVED** (nem con)

- (a) that the Comprehensive Integrated Transport Plan (CITP) be endorsed for submission to the MEC of Transport for approval;
- (b) that the section on Public Transport Safety and Security in the Comprehensive Integrated Transport Plan include the need to address the safety considerations for residents living along the railway line between du Toit Station and Koelenhof Station and that high level engagement be embarked upon with the Rail Safety Agency; and
- (c) that cognisance be taken of the matter relating to School Street, Jamestown, and that further high level engagement on said matter take place with the MEC for Local Government.

**(ACTING DIRECTOR: ENGINEERING SERVICES TO ACTION)**

**7.6.1**

**PLANNING OF AN INTEGRATED PUBLIC  
TRANSPORT SERVICE NETWORK AND  
THE PROVINCIAL PUBLIC TRANSPORT  
INSTITUTIONAL FRAMEWORK**

**APPENDIX 2**

Appendix 2 :



**STELLENBOSCH**  
STELLENBOSCH • PNIEL • FRANSCHHOEK  
MUNISIPALITEIT • UMASIPALA • MUNICIPALITY



Ons Verw/Our Ref: 17/9/2/2

31 May 2016

Minister Donald Grant  
MEC for Transport & Public Works  
9 Dorp Street  
**CAPE TOWN**  
8000

Dear Minister Grant

**STELLENBOSCH MUNICIPALITY COMPREHENSIVE INTEGRATED TRANSPORT PLAN - 2016**

Attached herewith please find a copy of the recently completed CITP - revision 12 February 2016.

At its 39th Council Meeting on 2016-03-30 under Item 8.1, Stellenbosch Municipal Council has taken the following decision regarding the attached CITP document:

- a) That the Comprehensive Integrated Transport Plan (CITP) be endorsed for submission to the MEC of Transport for approval;
- b) That the section on Public Safety and Security in the Comprehensive Integrated Transport Plan include the need to address the safety considerations for residents living along the railway line between du Toit Station and Koelenhof Station and that high level engagement be embarked upon with the Rail Safety Agency; and
- c) That cognisance be taken of the matter relating to School Street, Jamestown, and that further high level engagement on said matter take place with the MEC for Local Government.

You are hereby requested to consider this document for approval. Please liaise with the Acting Director Engineering Services, Mr Marius Wüst, should you have any queries or wish to propose amendments to this document.

You are thanked for your input in this document and we commit to work with your Department to successfully implement this plan.

Yours faithfully

**Conrad Sidego**  
EXECUTIVE MAYOR

**Richard Bosman**  
ACTING MUNICIPAL MANAGER

**7.6.1**

**PLANNING OF AN INTEGRATED PUBLIC  
TRANSPORT SERVICE NETWORK AND  
THE PROVINCIAL PUBLIC TRANSPORT  
INSTITUTIONAL FRAMEWORK**

**APPENDIX 3**



Head of Department  
Office of the Head of Department  
Jacqui.Gooch@westerncape.gov.za  
tel: +27 21 483 2826 fax: +27 21 483 5068

Ref: TPW 20/R

Mr EJ Wentzel  
Manager: Transport, Roads and Stormwater  
Stellenbosch Municipality  
PO Box 17  
**STELLENBOSCH**  
7599

Dear Mr Wentzel

**PLANNING OF AN INTEGRATED PUBLIC TRANSPORT SERVICE NETWORK AND THE PROVINCIAL PUBLIC TRANSPORT INSTITUTIONAL FRAMEWORK**

Your letter 17/9/1/2 dated 26 April 2016 has reference.

Many thanks for your letter, the content of which is noted. The Department of Transport and Public Works (DTPW) is pleased to hear about the intentions of the Stellenbosch Municipality in the improvement of mobility in the municipality through the formulation and implementation of an Integrated Public Transport Service Network (PTSN). We note the milestones for the first phase of the project as follows:

- Approval by the Stellenbosch Municipality of the initial system concept and principles as set out in the CITP;
- Preparation of demand forecasts, a proposed route network and operational parameters;
- Development of an initial Operations and Business Plan for submission to the Department of Transport for approval of funding through the PTN Grant;
- Stakeholder consultation; and
- The submission of an application to the DOT for grant funding.



Your reference to the Provincial Public Transport Institutional Framework (PPTIF) is also noted, and your statement that Stellenbosch Municipality has been identified as a priority municipality for implementation of the PPTIF is correct.

The DTPW has developed the PPTIF with the primary aim of addressing the key constraints to improving both public and non-motorised transport in the non-Metro areas of the Western Cape, through the development of a refined strategic approach for achieving progress. The PPTIF has identified the following key constraints to improvement in public and non-motorised transport in the province:

- Capacity constraints at the municipal level;
- The lack of dedicated funding streams for local public and non-motorised transport improvement;
- The lack of well-defined or developed approaches to public and non-motorised transport in non-metropolitan contexts; and
- The complexity of industry transition.

In response to these constraints, the PPTIF has developed an Incremental Approach to public transport improvement characterised by the following principles:

Impact	Description
Demonstrable improvement to public transport user experience	The Incremental Approach focusses on the "low hanging fruit" first in achieving rapid and demonstrable improvement in the transport experience of public transport users. Thus real improvements are achieved in the short term, whilst moving towards a broader, fully integrated network solution over the longer term.
Limits the capacity burden on government	Incremental implementation of improvement initiatives over time provides government with the time to progressively increase capacity and learn through experience, rather than being required to take on full responsibility for managing an IPTN all at once.
Lowers the cost of improvement	The Incremental Approach does not advocate for the rapid and full scale formalisation of public transport. Rather, the focus is on improving the condition for NMT, limited formalization on priority public transport routes, with the network being built up over time as and when the necessary resources become available. In addition, the phased approach aims to limit the need for costly compensation of public transport operators, contributing toward an overall reduction in the cost of system improvement.

Reduces the risk of transformation to the public transport industry	The Incremental Approach lowers the risk to the public transport industry by reducing the risk of each step in the process. The industry's business model is gradually adjusted over time, rather than being fully subsumed. This process inherently lowers risk and enhances the potential of successful engagement and transformation.
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The Incremental Approach includes three stages. It provides a framework which can be applied to different contexts and adapted accordingly, and it provides strategic guidance on what aspects of the transport system should be addressed or improved at what stage.

The PPTIF also includes proposed institutional arrangements for the implementation of the Incremental Approach at both provincial and municipal levels, and identifies priority municipalities for the implementation of the PPTIF.

The Department is in the process of submitting the PPTIF for cabinet approval.

Within this context, the Department would like to initiate a discussion with the Stellenbosch Municipality towards the implementation of the PPTIF in the municipality. We note your reference to national grant funding through the PTNG for your PTSN, and highlight that the Department secured PTNG funding for the George Integrated Public Transport Network, and that a core element of the PPTIF is securing funding for PPTIF implementation projects, including through joint applications to the DOT.

Our PPTIF programme manager, who is also my Chief Director of Public Transport, Ms Deidre Ribbonaar, will be in touch with yourselves to initiate the engagements. We look forward to forging a successful working relationship towards the implementation of the PPTIF and the improvement of public and non-motorised transport in the Stellenbosch Municipality.



**JACQUELINE GOOCH**  
**HEAD OF DEPARTMENT**

DATE: 25/5/2016



**STELLENBOSCH**

STELLENBOSCH • PNIEL • FRANSCHHOEK

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY



Our Ref/Ons Verw: 179/1/2

Your Ref/U Verw:

25 April 2016

Department of Transport and Integrated Planning  
Western Cape Government  
140 Loop Street  
CAPE TOWN  
8001

Attention: Me Deidre Ribbonaar

**STELLENBOSCH MUNICIPALITY: COMPREHENSIVE INTEGRATED TRANSPORT PLAN – PLANNING OF AN INTEGRATED PUBLIC TRANSPORT SERVICE NETWORK**

The Stellenbosch Municipality, Comprehensive Integrated Transport Plan (CITP) was approved by the Stellenbosch Council on 30 March 2016 and was submitted to the MEC on 06 April 2016. The CITP proposes that the existing, un-coordinated, conventional bus and minibus-type public transport services operating in the Stellenbosch municipal area be transformed into a quality Public Transport Service Network (PTSN) based on a reformed business model, including adherence to all standards and requirements set out in the National Land Transport Act and other applicable legislation and includes the requirement to upgrade existing services to be fully universally accessible over a reasonable period of time.

The purpose of this letter is to inform you of the scope of the planning and implementation of the initial pilot phase of the proposed public transport service network and to request the participation and assistance of the Western Cape Government in this process.

As stated in the CITP, the guiding principles for the PTSN are as follows:

- The PTSN will be planned and developed in compliance with the “Guidelines and Requirements: Public Transport Network Grant: 2015/2016, for Business Plan preparation underpinning Budget Proposals for MTEF 2016/17 to 2018/19” of the Department of Transport dated 30 May 2015, with the intention of the Stellenbosch Municipality submitting an application to secure grant funding.
- The PTSN will be planned and developed in consideration of and parallel to the transformation, empowerment and upliftment of the local Stellenbosch public transport industry.

- The objective of the PTSN will be to improve public transport service levels and the quality of life of the residents in the Stellenbosch Municipal area.
- The PTSN will be developed in phases with the ultimate goal of the introduction of an Integrated Public Transport Network in accordance with the National Transport Policy and the National Land Transport Act.
- The PTSN will be planned with the objective of achieving financial sustainability.

In the "Guidelines and Requirements: Public Transport Network Grant: 2015/2016, for Business Plan preparation underpinning Budget Proposals for MTEF 2016/17 to 2018/19", the Department of Transport sets out the various project types that qualify for investments from the national Public Transport Network (PTN) Grant. These include, not only Bus Rapid Transit systems with dedicated priority infrastructure more appropriate for large cities, but includes support for improved conventional bus and minibus services (a quality Public Transport Service Network) in smaller cities and towns provided that certain requirements, such as the transformation of the business and operational model, compliance with universal accessibility and operational improvements are introduced.

In the case of the Stellenbosch Municipality, neither the resources nor the space in the historical part of the town of Stellenbosch are available for consideration of a "full" BRT system. It is thus proposed that the latter option be pursued and that a PTSN be planned and implemented, in stages, with the focus on transformation of the existing bus and minibus system, the implementation of an initial pilot phase and an overall phased approach.

The proposed process for the development of the PTSN is indicated in the Annexure hereto and is in compliance with the Department of Transport Guidelines and Requirements for funding from the PTN Grant as well as a parallel process with a strong focus on the transformation of the existing public transport industry. The following key milestones set the framework for the first phase of the project:

- Approval by the Stellenbosch Municipality of the initial system concept and principles as set out in the CIP
- Preparation of demand forecasts, a proposed route network and operational parameters
- Development of an initial Operations and Business Plan for submission to the Department of Transport for approval of funding through the PTN Grant
- Stakeholder consultation

- The submission of an application to the DOT for grant funding

The consultation phase will include the establishment of a consultative forum or steering committee. Town Councillors should be delegated to participate in this process in order to provide political support.

Other important role-players that must be included in the consultation and planning process are educational institutions. The University of Stellenbosch has an important role to play as it is a high trip generator and it has already proposed a public transport system to serve the University.

During the process of the preparation of the CITP, the Project Team was informed of the initiative of the Western Cape Government to develop a Provincial Public Transport Institutional Framework (PPTIF) with the primary aim of addressing the key constraints to improving both public and non-motorised transport in the non-metropolitan areas of the Western Cape and to incorporate lessons learnt through the implementation of public transport improvement initiatives in South Africa, particularly in George and Cape Town by developing a flexible and context specific approach to public and non-motorised transport improvement, the development of enhanced institutional and organisational models and the development of a cost model and funding strategy.

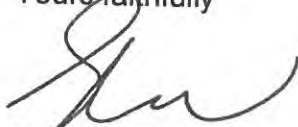
It was indicated that the Stellenbosch Municipality has been identified as one of the priority areas to benefit from this programme over the next five years.

I trust that the above explanation captures the intentions of the Stellenbosch Municipality with regard to improving mobility through enhanced public transport services. The success of this process will depend on the participation of the key role-players, of which the support of the Western Cape Government is paramount. A vital aspect of the support required is the proposed application to the Department of Transport for financial assistance through the Public Transport Network Grant. Your timely advice on formulation a successful grant application would be appreciated.

We look forward to your inputs at meetings of the Transport Committee that has been established at Council level and at meeting of the technical project team.

Please advise if there are issues which require further clarity.

Yours faithfully



**Mr EJ Wentzel**  
**Manager: Transport, Roads and Stormwater**

**7.6.1**

**PLANNING OF AN INTEGRATED PUBLIC  
TRANSPORT SERVICE NETWORK AND  
THE PROVINCIAL PUBLIC TRANSPORT  
INSTITUTIONAL FRAMEWORK**

**APPENDIX 4**

## MEMORANDUM OF AGREEMENT

Entered into by and between

**THE WESTERN CAPE GOVERNMENT VIA ITS DEPARTMENT OF TRANSPORT AND PUBLIC WORKS**

(Herein represented by **Ms Jacqui Gooch** in her capacity as the **Head of Department** of the Department of Transport and Public Works, and duly authorised thereto)

(Hereinafter referred to as "the Department")

and

**THE STELLENBOSCH MUNICIPALITY**

A Municipality established in terms of section 12 of the Local Government: Municipal Structures Act, Act 117 of 1998

(Herein represented by **Mr Richard Bosman** in his capacity as the **Acting Municipal Manager**, and duly authorised thereto)

(Hereinafter referred to as "the Municipality")

(Collectively hereinafter referred to as "the Parties")

Handwritten signatures and initials in the bottom right corner. There are three distinct signatures: one at the top right, one in the middle right, and one at the bottom right. The initials 'M.J.' are written to the left of the bottom signature, and 'R.H.K.' is written to the right of the bottom signature.

**INTRODUCTION**

- A. **WHEREAS** the Department has adopted the Provincial Public Transport Institutional Framework ("PPTIF"), which is the Province's renewed approach to developing sustainable transport systems and improving and transforming public and non-motorised transport in the Western Cape.
- B. **AND WHEREAS** as part of the PPTIF implementation programme, the Western Cape Government has made a commitment to partner with selected priority municipalities to jointly achieve the objectives of the PPTIF and to plan, implement and manage sustainable transport initiatives, including incremental improvements to public and non-motorised transport.
- C. **AND WHEREAS** the Incremental Approach is intended to be implemented over three stages, which are expanded upon in this Agreement.
- D. **AND WHEREAS** the Municipality has been identified as a priority municipality for implementation of the PPTIF.
- E. **AND WHEREAS** the Parties acknowledge that the Municipality may need to conduct an investigation in terms of Section 78 of the Municipal Systems Act, Act 32 of 2000 ("the Systems Act").
- F. **AND WHEREAS** the Parties acknowledge that the Department will assist and provide support to the Municipality in order for it complete the aforementioned Section 78 investigation.
- G. **NOW THEREFORE** the Parties wish to enter into this Agreement in order to ensure a co-ordinated exercise of powers and to regulate their relationship with respect to the planning and implementation of the PPTIF.

**THE PARTIES RECORD THEIR AGREEMENT IN WRITING AS FOLLOWS:****1. DEFINITIONS AND INTERPRETATION**

- 1.1 In this Agreement the following expressions bear the meanings assigned to them below and cognate expressions bear corresponding meanings:

*Handwritten signatures and initials:*  
 FHS  
 MT  
 BAC



- 1.1.1 "**Agreement**" means this Memorandum of Agreement between the Parties, together with all annexures hereto, whether included in this Agreement at the date of signature or at any later date in terms of this Agreement.
- 1.1.2 "**Business day**" in reference to any time limit prescribed herein shall include Monday, Tuesday, Wednesday, Thursday and Friday, except if any of the aforesaid days is a public holiday in the Republic of South Africa.
- 1.1.3 "**Incremental Approach**" means a step-wise approach to improving public and non-motorised transport as contemplated by the PPTIF;
- 1.1.4 "**Municipal Area**" means the jurisdictional area of the Municipality; and
- 1.1.5 "**Signature Date**" means the date on which the last signing Party signs this Agreement (and any of the related annexures hereto).
- 1.2 Words and expressions defined in any clause shall, for the purpose of that clause, bear the meaning assigned to such words and expressions in that clause.
- 1.3 The headings of the clauses are for the purpose of convenience and reference only and shall not aid in the interpretation of, nor modify the provisions of, the Agreement or any clause thereof.
- 1.4 In this Agreement, unless the context indicates a contrary intention, a word or expression which denotes –
- 1.4.1 any one sex or gender includes the other sex or gender, as the case may be;
- 1.4.2 the singular includes the plural and *vice versa*; and
- 1.4.3 natural persons includes juristic persons and *vice versa*.
- 1.5 When any number of days is prescribed such number shall exclude the first day and include the last day unless the last day falls on a Saturday, Sunday or public holiday in the Republic of South Africa, in which case the last day shall be the next

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succeeding day which is not a Saturday, Sunday or a public holiday in the Republic of South Africa.

**2. COMMENCEMENT, DURATION AND TERMINATION OF THE AGREEMENT**

- 2.1 This Agreement shall come into effect on the Signature Date and shall continue for 24 (twenty four) months or until this Agreement is terminated by either one of the Parties, subject to clause 2.2 below.
- 2.2 Either Party may terminate this Agreement by giving written notice to the other Party.
- 2.3 After the initial 24 (twenty four) month period, set out in clause 2.1 above, the Parties may extend the Agreement on a month to month basis provided that both Parties agree to such an extension.
- 2.4 In executing the Agreement between the Parties, the Parties should be mindful of the Incremental Approach adopted in the PPTIF, which includes the following stages:
- 2.4.1 Stage 1 includes the following:
- Develop a sustainable transport plan;
  - Strong focus on non-motorised transport;
  - Basic public transport infrastructure improvements;
  - Improve public transport facilities management;
  - Improved regulation, enforcement and training of existing public transport operators, and
  - Strengthened industry engagement.
- 2.4.2 Stage 2 includes the following:
- Continuation of Stage 1 initiatives;
  - Provision of business advisory and fleet renewal support to operators;
  - Introduction of small subsidised service contracts with existing operators for the provision of higher quality public transport services;
  - Introduction of selected commercial public transport service contracts;

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- Introduction of low-cost Intelligent Ticketing System (ITS) and Automated Fare Collection (AFC) systems; and
- Development of basic bus stop infrastructure.

2.4.3 Stage 3 includes the following:

- Continuation of Stage 1 and 2 initiatives;
- Progressive expansion of subsidised public transport in a context-appropriate and financially sustainable manner, including the development of a hybrid-type system.
- Development of infrastructure required to support these services.
- Development of Advanced Public Transport Management System (APTMS) and Integrated Fare Management (IFM).

### 3. ROLES AND RESPONSIBILITIES OF THE PARTIES

3.1 The Department shall be responsible for the following:

- 3.1.1 Undertaking all necessary planning required for the PPTIF after consultation with the Municipality;
- 3.1.2 Carrying out all the data collection work that will be required for the PPTIF in the Municipal Area;
- 3.1.3 Developing the particular Incremental Approach for the Municipality, which will be prepared after consultation with the Municipality;
- 3.1.4 Assisting the Municipality to create the necessary budgets from the Municipality's own revenue and grants for the implementation and management of the PPTIF in the Municipal area;
- 3.1.5 Identifying and sourcing additional sources of funding for the PPTIF, including donor funding;
- 3.1.6 Procuring all necessary and appropriate service providers for the planning and scoping phases of the PPTIF in the Municipality's Area; and

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3.1.7 Supporting the Municipality to complete an investigation in terms of Section 78 of the Systems Act, if required, including the feasibility study and service delivery agreements.

3.2 The Municipality shall be responsible for the following:

3.2.1 Supporting all necessary planning for the PPTIF and providing input to these plans through the PPTIF Planning Committee;

3.2.2 The Municipality shall assist and cooperate with the Department to create a budget, from its own revenue or grants, for the implementation and management of the PPTIF in the Municipal Area. This includes:

3.2.2.1 Supporting the Department's assessment of the Municipality's operating and capital budget and relevant conditional grant income; and

3.2.2.2 Supporting the Department's efforts to source additional funding for the PPTIF, including donor funding.

3.2.3 Conduct an investigation required in terms of Section 78 of the Systems Act in order to review and decide on the appropriate mechanism to provide public transport and related services in the Municipal Area, which assessment and review will be done with the support and assistance of the Department.

3.3 Both Parties shall be responsible for the following:

3.3.1 Establishing the PPTIF Planning Committee, as detailed in clause 5 below;

3.3.2 Appointing the appropriate and designated officials to the PPTIF Planning Committee;

3.3.3 Upon conclusion of the Section 78 investigation, the Parties may consider to refer the report on of that investigation to the Negotiating Committee ("the Negotiating Committee"), which will consider the need for the conclusion of

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any further agreements and/or recommendations to be considered by the Parties thereafter;

- 3.3.4 Appointing the appropriate and designated officials to the Negotiating Committee;
- 3.3.5 Ensuring that the members of the Negotiating Committee participate as set out and detailed in Clause 4 below;
- 3.3.6 Discuss and agree to identifying and designing the appropriate priority interventions for non-motorised transport and public transport infrastructure required in the Municipal Area; and
- 3.3.7 Within the initial 24 (twenty four) month period after the signature of this Agreement and subject to the availability of funding, agree to an implementation plan for any priority interventions, as per clause 3.3.6.

**4. THE NEGOTIATING COMMITTEE**

- 4.1 Following the findings of the Section 78 investigation, the Parties may need to establish the Negotiating Committee in order to negotiate further agreements between the Parties, which will provide for, *inter alia*, the institutional and financial arrangements between the Parties, and set out and allocate the roles and responsibilities of the Parties.
- 4.2 The Negotiating Committee will be authorised to negotiate, but not to conclude, the terms and conditions of such further agreements between the Parties.
- 4.3 The Parties shall appoint the following designated officials to the Negotiating Committee:

**From the Municipality:**

- 4.3.1 The Municipal Manager and/or his/her nominated representative;
- 4.3.2 The Director of the Department responsible for public and non-motorised transport and/or his/her nominated representative;

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4.3.3 The Director of the Department responsible for Finance and/or his/her nominated representative;

4.3.4 The Director of the Department responsible for Spatial Planning and/or his/her nominated representative;

4.3.5 The Director of the Department responsible for Legal Services and/or Corporate Services and/or his/her nominated representative;

4.3.6 The Director of the Department responsible for Safety and Security and/or Law Enforcement and/or his/her nominated representative;

**From the Department:**

4.3.7 The Chief Director of Transport Operations and/or his/her nominated representative;

4.3.8 The Director responsible for Land Transport Integration and Oversight and/or his/her nominated representative; and

4.3.9 Deputy Director responsible for Cape Winelands and Central Karoo and/or his/her nominated representative.

4.4 Additionally, the Parties agree that a facilitator, which may be one or more individuals from the technical team, shall be appointed to the Negotiating Committee to facilitate all meetings of the committee, and that this appointment shall be made by the Department.

4.5 The designated officials in the Negotiating Committee will at its first meeting agree to a meeting schedule for the committee and shall participate in all negotiations and discussions in the spirit of cooperative governance and do so in good faith.

4.6 The Terms of Reference and meeting schedule shall be decided upon at the first meeting of the Negotiating Committee.

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**5. THE PPTIF PLANNING COMMITTEE**

5.1 The Parties will establish the PPTIF Planning Committee in order for the Municipality to be kept informed and provide input to the planning process referred to in clause 3.1.1; 3.1.2 and 3.1.3 above.

5.2 The Parties shall appoint the following designated officials to the PPTIF Planning Committee:

**From the Municipality:**

5.2.1 The Director of and/or the official from the Department responsible for public transport and/or his/her nominated representative;

5.2.2 The Director of and/or the official from the Department responsible for Spatial Planning and/or his/her nominated representative;

5.2.3 The Director of the Department responsible for Safety and Security and/or Law Enforcement and/or his/her nominated representative;

**From the Department:**

5.2.4 The Chief Director of Transport Operations and/or his/her nominated representative;

5.2.5 The Director responsible for Land Transport Integration and Oversight and/or his/her nominated representative; and

5.2.6 Deputy Director responsible for Cape Winelands and Central Karoo and/or his/her nominated representative.

5.3 The PPTIF Planning Committee shall meet quarterly.

5.4 The designated officials in the PPTIF Planning Committee will at its first meeting agree to a schedule of the quarterly meetings for the committee and shall participate in all discussions in the spirit of cooperative governance and do so in good faith.

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**6. CO-OPERATIVE GOVERNANCE**

6.1 The Parties will adhere to the principles of co-operative governance as reflected in sections 40 and 41 of Chapter 3 of the Constitution and sections 4 and 5 of the Intergovernmental Relations Framework Act, Act 13 of 2005, ("the IGRF Act").

6.2 The Parties will agree to:

6.2.1 Co-operate with one another in mutual trust and good faith by:

6.2.1.1 fostering friendly relations;

6.2.1.2 assisting and supporting one another;

6.2.1.3 informing one another of and consulting with one another on matters of common interest related to the Project;

6.2.1.4 adhering to agreed procedures and principles;

6.2.1.5 conducting actions and process in terms of the IGRF Act;

6.2.1.6 diligently fulfilling all their undertakings and obligations as set out in this Agreement to ensure that the required outcomes are met;

6.2.1.7 respecting each other's roles, responsibilities and obligations and not acting in a manner that encroaches or impinges on the institutional integrity of the other Party; and

6.2.1.8 always acting in the best interests of each other when any decisions are to be made or when any action is to be taken.

**7. DISPUTE RESOLUTION**

7.1 This Agreement shall be governed by and constructed in accordance with the laws of the Republic of South Africa. The Parties have a duty to avoid disputes, and the Parties must make every reasonable effort –

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(a) to avoid a dispute when exercising their statutory powers; or

(b) to settle a dispute without resorting to judicial proceedings.

7.2 In the event of a dispute arising from this Agreement, the Parties shall make every effort to settle such dispute amicably. If the dispute is not capable of being settled between the Parties amicably, such dispute shall be elevated to the Senior Management / Executive or their duly assigned representatives for mediation purposes.

7.3 Should the dispute not be resolved through mediation within 30 days of being referred by either Party to mediation, either Party may declare such dispute a formal intergovernmental dispute by notifying the other Party of such declaration in writing, as intended and provided for in section 41 of the IGRF Act, in which event the Parties will follow the procedure as outlined in section 42 of the IGRF Act.

**8. NO CESSION/TRANSFER**

No rights or obligations which any Party may have in terms of this Agreement shall be capable of cession or transfer without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

**9. ENTIRE AGREEMENT**

This Agreement constitutes the entire agreement between the Parties as to the subject matter hereof and no agreement, representations or warranties between the Parties other than those set out herein are binding on the Parties.

**10. BREACH**

Subject to clauses 6 and 7 above, should a Party breach any or all of the terms and conditions of this Agreement, and remain in such breach 10 (ten) Business days after receipt of a written notice calling upon it to remedy such breach, then the Party who served such notice shall be entitled, in addition to any remedy which it may have in law, to cancel this Agreement, or to remedy the breach itself.

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**11. NOTICES AND DOMICILIA**

11.1 The Parties choose as their *domiciled citandi et executandi* their respective addresses as set out in Clause 11.2 for all purposes arising out of or in connection with this Agreement at which addresses all processes and notices arising out of or in connection with this Agreement, its breach or termination, may validly be served upon or delivered to the Parties.

11.2 For purpose of this Agreement the Parties respective addresses shall be:

**The Department:**

The Head of Department  
Western Cape Government: Department of Transport and Public Works  
9 Dorp Street  
Cape Town

**The Municipality:**

The Municipal Manager  
Town House Complex  
Plein Street  
Stellenbosch

11.3 Each of the Parties shall be entitled; from time to time by written notice to the other to vary its *domicillium* to any other address within the Western Cape Department of the Republic of South Africa is not a Post Office Box or *Poste Restante*.

11.3.1 if delivered by hand, be deemed to have been duly received by the addressee on the date of delivery; or

11.3.2 if forwarded by pre-paid registered post, be deemed to have been received by the addressee 4 (four) business days after the date of postage.



- 11.4 Notwithstanding anything to the contrary contained in this Agreement, a written notice or communication actually received by one of the Parties from the other Party shall be adequate written notice of communication to such Party.

**12. WARRANTY OF AUTHORITY**

Each Party warrants to each of the other Parties that it has the power, authority and legal right to sign and perform this Agreement and that this Agreement has been duly authorised by necessary actions of its officials or structures, if required, and binding obligations on it in accordance with the terms of this Agreement.

**13. GENERAL TERMS AND CONDITIONS**

13.1 *Interpretation of the Agreement*

The law of the Republic of South Africa shall govern the interpretation of the Agreement. If any change in the law renders any material provision of the Agreement illegal or void, either Party may terminate the Agreement immediately.

13.2 *Variation*

No amendment, alteration, addition or suspension of any provision of the Agreement shall be of any force, unless reduced to writing and signed by both Parties.

13.3 *Waiver*

No waiver of any right in terms of the Agreement shall be binding for any purpose unless expressed in writing and signed by the Party concerned and such waiver shall be effective only in the specific instance and for the purpose given. No failure or delay on the part of either Party in exercising any right precludes any other or further exercise thereof or the exercise of any other right.

13.4 *Cession and Invalid Provisions*

A Party may not cede any right or obligation in terms of the Agreement to another person without the other Party's written consent.



14. SEVERABILITY

If any provision of the Agreement is or becomes invalid or unenforceable, such provision shall be divisible and be regarded as *pro non scripto* and the remainder of the Agreement shall be regarded as valid and binding unless materially affected.

15. RELATIONSHIP

15.1 This Agreement does not create an employment relationship, partnership, joint venture or agency between the Parties and neither Party shall be liable for the debts of the other Party, howsoever incurred.

15.2 The Municipality has no authority or right to bind the Department to any third party and it shall be liable for any act purporting to so bind the Department.

SIGNED AT CAPE TOWN ON THIS 21 DAY OF JULY 2016

  
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THE DEPARTMENT

(Herein represented by **Ms Jacqui Gooch** in her capacity as **Head of Department**, duly authorised hereto)

AS WITNESSES:

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SIGNED AT Stellenbosch ON THIS 8<sup>th</sup> DAY OF JULY 2016



**THE MUNICIPALITY**

(Herein represented by **Mr Richard Bosman** in his capacity as **Acting Municipal Manager**, duly authorised hereto)

**AS WITNESSES**

1. 
2. 



7.6.2	<b>SECTION 78 PROCESS FOR AN EXTERNAL SERVICE DELIVERY MECHANISM WITH REGARD TO PUBLIC TRANSPORT</b>
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**1. PURPOSE OF REPORT**

To obtain Council's approval to start with the Section 78 process in terms of the Municipal Systems Act (Act No 32 of 2000) to investigate the best service delivery mechanism for the implementation of the Stellenbosch Integrated Public Transport Network. The Systems Act requires that a municipality that is in the process of deciding a mechanism to provide a municipal service to first assess the provision of that service through an internal mechanism and thereafter, either decide to provide that service through an internal mechanism or explore the possibility of providing the municipal service through an external mechanism. It further requires that, should a municipality decide to provide that service through an external mechanism, it must, inter alia, conduct a feasibility study in accordance with the requirements set forth in the said Municipal Systems Act Section 78. The purpose of the memorandum is to request Council's approval for assessing the municipal's internal capacity to deliver the Public Transport service for the IPTN and make a recommendation as to the appropriate service delivery mechanism to be followed and to further obtain Council's approval to conduct a feasibility study in terms of the said Act.

**2. BACKGROUND**

The Stellenbosch Municipality has identified the implementation of the Public Transport Network as a priority project in the latest Comprehensive Integrated Transport Plan. The municipality approached the Western Cape Department of Transport and Public Works (WCDTPW) for assistance with the implementation of the Public Transport Network. The Department informed Stellenbosch that Stellenbosch has been identified as a priority town for assistance in terms of their Provincial Sustainable Transport Programme (PSTP). The WCDPT has entered into a partnership with the Stellenbosch Municipality to jointly develop sustainable transport projects in the municipal area (see copy of agreement attached as **APPENDIX 1**). This initiative forms part of the Department's (PSTP) that aims to drive improvement to local transport, and build on the success and lessons of the George Integrated Public Transport Network (GIPTN), which has been driven and funded by the WCDTPW.

In Stellenbosch, the WCDTPW intends to provide the necessary planning, capacity building, implementation and funding support required to develop improvements to public transport, non-motorised transport and travel demand management with the aim of shifting Stellenbosch onto a more sustainable transport trajectory (refer **APPENDIX 2**). During the 2016/17 financial year, the WCDTPW will work with the Municipality, the University, Business and other stakeholders to plan for an integrated programme of delivery to commence properly in the 2017/18 financial year.

The WCDTPW indicated that it is committed to building a lasting and supportive relationship with the Municipality, as it has done with the Municipality of George.

**3. DISCUSSION**

The Stellenbosch Municipality is experiencing high levels of traffic congestion and some of the contributing factors are:

More than 50% (approx. 11,000 students) travel to and from class by private vehicle, even though 67% of them reside on the campus or within 5 km from campus.

- Lack of access to bicycles and bicycle facilities.
- Outdated, unsafe and unreliable public transport.
- Unsafe operating conditions for pedestrians and cyclists

Stellenbosch Municipality must intervene in the continued investment to accommodate the single private vehicle that take up large areas on the road and valuable parking space. We are certainly funding an unsustainable transport system that is already not operating at an acceptable level of service. We have already experienced businesses leaving Stellenbosch as a result of the poor operating condition of our transport system and many are in the process of doing so. The alternative and more sustainable approach to ensure effective and efficient functioning of the Stellenbosch transportation system is to change the emphasis away from the private vehicle and give higher priority to public transport and non-motorised transport (Pedestrians and cyclists). This new emphasis will allow a more cost effective and efficient movement of people. The WCDTPW has committed themselves to assist Stellenbosch Municipality to improve our transport system and ensure long term sustainability through their PSTP.

The statutory requirements in terms of the Municipal Systems Act must be adhered to and the requirements as earlier been alerted to are indicated in the attached presentation.

**4. FINANCIAL IMPLICATIONS**

The roll out of the PSTP in Stellenbosch will have no financial implication for the Stellenbosch Municipality as the costs will be beared by the WCDTPW.

**5. CONCLUSION**

The provision of a sustainable transport system for Stellenbosch is one of its critical challenges and the continued investment to plan and design for the low occupied private vehicle is not feasible any longer. Alternative measures to ensure the sustainability of the Stellenbosch transport system are required. The PSTP provides this opportunity to explore changes to our transport system that will ensure long term sustainability.

**RECOMMENDED**

- (a) that Council approves the proposal that an assessment of the municipality's capacity be done to determine its ability to provide the proposed public transport service through an internal mechanism and that the recommendation of the assessment be submitted to Council for consideration and decision; and

- 
- (b) that, should the above assessment recommend the use of an external mechanism for the provision of the public transport service, a feasibility study be conducted for the provision of the service through an external mechanism.

<b>Meeting: Ref No:</b>	<i>4<sup>th</sup> Council: 2016-11-23 8/1 Engineering</i>	<b>Submitted by Directorate: Author: Referred from:</b>	<i>Infrastructure W Pretorius Mayco: 2016-11-16</i>
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**7.6.2**

**SECTION 78 PROCESS FOR AN EXTERNAL  
SERVICE DELIVERY MECHANISM WITH  
REGARD TO PUBLIC TRANSPORT**

**APPENDIX 1**

## MEMORANDUM OF AGREEMENT

Entered into by and between

**THE WESTERN CAPE GOVERNMENT VIA ITS DEPARTMENT OF TRANSPORT AND PUBLIC WORKS**

(Herein represented by **Ms Jacqui Gooch** in her capacity as the **Head of Department** of the Department of Transport and Public Works, and duly authorised thereto)

(Hereinafter referred to as "the Department")

and

**THE STELLENBOSCH MUNICIPALITY**

A Municipality established in terms of section 12 of the Local Government: Municipal Structures Act, Act 117 of 1998

(Herein represented by **Mr Richard Bosman** in his capacity as the **Acting Municipal Manager**, and duly authorised thereto)

(Hereinafter referred to as "the Municipality")

(Collectively hereinafter referred to as "the Parties")

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**INTRODUCTION**

- A. **WHEREAS** the Department has adopted the Provincial Public Transport Institutional Framework ("PPTIF"), which is the Province's renewed approach to developing sustainable transport systems and improving and transforming public and non-motorised transport in the Western Cape.
- B. **AND WHEREAS** as part of the PPTIF implementation programme, the Western Cape Government has made a commitment to partner with selected priority municipalities to jointly achieve the objectives of the PPTIF and to plan, implement and manage sustainable transport initiatives, including incremental improvements to public and non-motorised transport.
- C. **AND WHEREAS** the Incremental Approach is intended to be implemented over three stages, which are expanded upon in this Agreement.
- D. **AND WHEREAS** the Municipality has been identified as a priority municipality for implementation of the PPTIF.
- E. **AND WHEREAS** the Parties acknowledge that the Municipality may need to conduct an investigation in terms of Section 78 of the Municipal Systems Act, Act 32 of 2000 ("the Systems Act").
- F. **AND WHEREAS** the Parties acknowledge that the Department will assist and provide support to the Municipality in order for it complete the aforementioned Section 78 investigation.
- G. **NOW THEREFORE** the Parties wish to enter into this Agreement in order to ensure a co-ordinated exercise of powers and to regulate their relationship with respect to the planning and implementation of the PPTIF.

**THE PARTIES RECORD THEIR AGREEMENT IN WRITING AS FOLLOWS:****1. DEFINITIONS AND INTERPRETATION**

- 1.1 In this Agreement the following expressions bear the meanings assigned to them below and cognate expressions bear corresponding meanings:

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- 1.1.1 "**Agreement**" means this Memorandum of Agreement between the Parties, together with all annexures hereto, whether included in this Agreement at the date of signature or at any later date in terms of this Agreement.
- 1.1.2 "**Business day**" in reference to any time limit prescribed herein shall include Monday, Tuesday, Wednesday, Thursday and Friday, except if any of the aforesaid days is a public holiday in the Republic of South Africa.
- 1.1.3 "**Incremental Approach**" means a step-wise approach to improving public and non-motorised transport as contemplated by the PPTIF;
- 1.1.4 "**Municipal Area**" means the jurisdictional area of the Municipality; and
- 1.1.5 "**Signature Date**" means the date on which the last signing Party signs this Agreement (and any of the related annexures hereto).
- 1.2 Words and expressions defined in any clause shall, for the purpose of that clause, bear the meaning assigned to such words and expressions in that clause.
- 1.3 The headings of the clauses are for the purpose of convenience and reference only and shall not aid in the interpretation of, nor modify the provisions of, the Agreement or any clause thereof.
- 1.4 In this Agreement, unless the context indicates a contrary intention, a word or expression which denotes –
- 1.4.1 any one sex or gender includes the other sex or gender, as the case may be;
- 1.4.2 the singular includes the plural and *vice versa*; and
- 1.4.3 natural persons includes juristic persons and *vice versa*.
- 1.5 When any number of days is prescribed such number shall exclude the first day and include the last day unless the last day falls on a Saturday, Sunday or public holiday in the Republic of South Africa, in which case the last day shall be the next

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*FAR*

succeeding day which is not a Saturday, Sunday or a public holiday in the Republic of South Africa.

**2. COMMENCEMENT, DURATION AND TERMINATION OF THE AGREEMENT**

- 2.1 This Agreement shall come into effect on the Signature Date and shall continue for 24 (twenty four) months or until this Agreement is terminated by either one of the Parties, subject to clause 2.2 below.
- 2.2 Either Party may terminate this Agreement by giving written notice to the other Party.
- 2.3 After the initial 24 (twenty four) month period, set out in clause 2.1 above, the Parties may extend the Agreement on a month to month basis provided that both Parties agree to such an extension.
- 2.4 In executing the Agreement between the Parties, the Parties should be mindful of the Incremental Approach adopted in the PPTIF, which includes the following stages:
- 2.4.1 Stage 1 includes the following:
- Develop a sustainable transport plan;
  - Strong focus on non-motorised transport;
  - Basic public transport infrastructure improvements;
  - Improve public transport facilities management;
  - Improved regulation, enforcement and training of existing public transport operators, and
  - Strengthened industry engagement.
- 2.4.2 Stage 2 includes the following:
- Continuation of Stage 1 initiatives;
  - Provision of business advisory and fleet renewal support to operators;
  - Introduction of small subsidised service contracts with existing operators for the provision of higher quality public transport services;
  - Introduction of selected commercial public transport service contracts;

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- Introduction of low-cost Intelligent Ticketing System (ITS) and Automated Fare Collection (AFC) systems; and
- Development of basic bus stop infrastructure.

2.4.3 Stage 3 includes the following:

- Continuation of Stage 1 and 2 initiatives;
- Progressive expansion of subsidised public transport in a context-appropriate and financially sustainable manner, including the development of a hybrid-type system.
- Development of infrastructure required to support these services.
- Development of Advanced Public Transport Management System (APTMS) and Integrated Fare Management (IFM).

### 3. ROLES AND RESPONSIBILITIES OF THE PARTIES

3.1 The Department shall be responsible for the following:

- 3.1.1 Undertaking all necessary planning required for the PPTIF after consultation with the Municipality;
- 3.1.2 Carrying out all the data collection work that will be required for the PPTIF in the Municipal Area;
- 3.1.3 Developing the particular Incremental Approach for the Municipality, which will be prepared after consultation with the Municipality;
- 3.1.4 Assisting the Municipality to create the necessary budgets from the Municipality's own revenue and grants for the implementation and management of the PPTIF in the Municipal area;
- 3.1.5 Identifying and sourcing additional sources of funding for the PPTIF, including donor funding;
- 3.1.6 Procuring all necessary and appropriate service providers for the planning and scoping phases of the PPTIF in the Municipality's Area; and

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3.1.7 Supporting the Municipality to complete an investigation in terms of Section 78 of the Systems Act, if required, including the feasibility study and service delivery agreements.

3.2 The Municipality shall be responsible for the following:

3.2.1 Supporting all necessary planning for the PPTIF and providing input to these plans through the PPTIF Planning Committee;

3.2.2 The Municipality shall assist and cooperate with the Department to create a budget, from its own revenue or grants, for the implementation and management of the PPTIF in the Municipal Area. This includes:

3.2.2.1 Supporting the Department's assessment of the Municipality's operating and capital budget and relevant conditional grant income; and

3.2.2.2 Supporting the Department's efforts to source additional funding for the PPTIF, including donor funding.

3.2.3 Conduct an investigation required in terms of Section 78 of the Systems Act in order to review and decide on the appropriate mechanism to provide public transport and related services in the Municipal Area, which assessment and review will be done with the support and assistance of the Department.

3.3 Both Parties shall be responsible for the following:

3.3.1 Establishing the PPTIF Planning Committee, as detailed in clause 5 below;

3.3.2 Appointing the appropriate and designated officials to the PPTIF Planning Committee;

3.3.3 Upon conclusion of the Section 78 investigation, the Parties may consider to refer the report on of that investigation to the Negotiating Committee ("the Negotiating Committee"), which will consider the need for the conclusion of

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any further agreements and/or recommendations to be considered by the Parties thereafter;

- 3.3.4 Appointing the appropriate and designated officials to the Negotiating Committee;
- 3.3.5 Ensuring that the members of the Negotiating Committee participate as set out and detailed in Clause 4 below;
- 3.3.6 Discuss and agree to identifying and designing the appropriate priority interventions for non-motorised transport and public transport infrastructure required in the Municipal Area; and
- 3.3.7 Within the initial 24 (twenty four) month period after the signature of this Agreement and subject to the availability of funding, agree to an implementation plan for any priority interventions, as per clause 3.3.6.

**4. THE NEGOTIATING COMMITTEE**

- 4.1 Following the findings of the Section 78 investigation, the Parties may need to establish the Negotiating Committee in order to negotiate further agreements between the Parties, which will provide for, *inter alia*, the institutional and financial arrangements between the Parties, and set out and allocate the roles and responsibilities of the Parties.
- 4.2 The Negotiating Committee will be authorised to negotiate, but not to conclude, the terms and conditions of such further agreements between the Parties.
- 4.3 The Parties shall appoint the following designated officials to the Negotiating Committee:

**From the Municipality:**

- 4.3.1 The Municipal Manager and/or his/her nominated representative;
- 4.3.2 The Director of the Department responsible for public and non-motorised transport and/or his/her nominated representative;

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4.3.3 The Director of the Department responsible for Finance and/or his/her nominated representative;

4.3.4 The Director of the Department responsible for Spatial Planning and/or his/her nominated representative;

4.3.5 The Director of the Department responsible for Legal Services and/or Corporate Services and/or his/her nominated representative;

4.3.6 The Director of the Department responsible for Safety and Security and/or Law Enforcement and/or his/her nominated representative;

**From the Department:**

4.3.7 The Chief Director of Transport Operations and/or his/her nominated representative;

4.3.8 The Director responsible for Land Transport Integration and Oversight and/or his/her nominated representative; and

4.3.9 Deputy Director responsible for Cape Winelands and Central Karoo and/or his/her nominated representative.

4.4 Additionally, the Parties agree that a facilitator, which may be one or more individuals from the technical team, shall be appointed to the Negotiating Committee to facilitate all meetings of the committee, and that this appointment shall be made by the Department.

4.5 The designated officials in the Negotiating Committee will at its first meeting agree to a meeting schedule for the committee and shall participate in all negotiations and discussions in the spirit of cooperative governance and do so in good faith.

4.6 The Terms of Reference and meeting schedule shall be decided upon at the first meeting of the Negotiating Committee.

*Handwritten initials and signatures:*  
SWW  
MS  
KAR  
P  
P

## 5. THE PPTIF PLANNING COMMITTEE

5.1 The Parties will establish the PPTIF Planning Committee in order for the Municipality to be kept informed and provide input to the planning process referred to in clause 3.1.1; 3.1.2 and 3.1.3 above.

5.2 The Parties shall appoint the following designated officials to the PPTIF Planning Committee:

### From the Municipality:

5.2.1 The Director of and/or the official from the Department responsible for public transport and/or his/her nominated representative;

5.2.2 The Director of and/or the official from the Department responsible for Spatial Planning and/or his/her nominated representative;

5.2.3 The Director of the Department responsible for Safety and Security and/or Law Enforcement and/or his/her nominated representative;

### From the Department:

5.2.4 The Chief Director of Transport Operations and/or his/her nominated representative;

5.2.5 The Director responsible for Land Transport Integration and Oversight and/or his/her nominated representative; and

5.2.6 Deputy Director responsible for Cape Winelands and Central Karoo and/or his/her nominated representative.

5.3 The PPTIF Planning Committee shall meet quarterly.

5.4 The designated officials in the PPTIF Planning Committee will at its first meeting agree to a schedule of the quarterly meetings for the committee and shall participate in all discussions in the spirit of cooperative governance and do so in good faith.


  
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## 6. CO-OPERATIVE GOVERNANCE

6.1 The Parties will adhere to the principles of co-operative governance as reflected in sections 40 and 41 of Chapter 3 of the Constitution and sections 4 and 5 of the Intergovernmental Relations Framework Act, Act 13 of 2005, ("the IGRF Act").

6.2 The Parties will agree to:

6.2.1 Co-operate with one another in mutual trust and good faith by:

6.2.1.1 fostering friendly relations;

6.2.1.2 assisting and supporting one another;

6.2.1.3 informing one another of and consulting with one another on matters of common interest related to the Project;

6.2.1.4 adhering to agreed procedures and principles;

6.2.1.5 conducting actions and process in terms of the IGRF Act;

6.2.1.6 diligently fulfilling all their undertakings and obligations as set out in this Agreement to ensure that the required outcomes are met;

6.2.1.7 respecting each other's roles, responsibilities and obligations and not acting in a manner that encroaches or impinges on the institutional integrity of the other Party; and

6.2.1.8 always acting in the best interests of each other when any decisions are to be made or when any action is to be taken.

## 7. DISPUTE RESOLUTION

7.1 This Agreement shall be governed by and constructed in accordance with the laws of the Republic of South Africa. The Parties have a duty to avoid disputes, and the Parties must make every reasonable effort –

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(a) to avoid a dispute when exercising their statutory powers; or

(b) to settle a dispute without resorting to judicial proceedings.

7.2 In the event of a dispute arising from this Agreement, the Parties shall make every effort to settle such dispute amicably. If the dispute is not capable of being settled between the Parties amicably, such dispute shall be elevated to the Senior Management / Executive or their duly assigned representatives for mediation purposes.

7.3 Should the dispute not be resolved through mediation within 30 days of being referred by either Party to mediation, either Party may declare such dispute a formal intergovernmental dispute by notifying the other Party of such declaration in writing, as intended and provided for in section 41 of the IGRF Act, in which event the Parties will follow the procedure as outlined in section 42 of the IGRF Act.

**8. NO CESSION/TRANSFER**

No rights or obligations which any Party may have in terms of this Agreement shall be capable of cession or transfer without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

**9. ENTIRE AGREEMENT**

This Agreement constitutes the entire agreement between the Parties as to the subject matter hereof and no agreement, representations or warranties between the Parties other than those set out herein are binding on the Parties.

**10. BREACH**

Subject to clauses 6 and 7 above, should a Party breach any or all of the terms and conditions of this Agreement, and remain in such breach 10 (ten) Business days after receipt of a written notice calling upon it to remedy such breach, then the Party who served such notice shall be entitled, in addition to any remedy which it may have in law, to cancel this Agreement, or to remedy the breach itself.

MS  
P  
RAE

**11. NOTICES AND DOMICILIA**

11.1 The Parties choose as their *domiciled citandi et executandi* their respective addresses as set out in Clause 11.2 for all purposes arising out of or in connection with this Agreement at which addresses all processes and notices arising out of or in connection with this Agreement, its breach or termination, may validly be served upon or delivered to the Parties.

11.2 For purpose of this Agreement the Parties respective addresses shall be:

**The Department:**

The Head of Department  
Western Cape Government: Department of Transport and Public Works  
9 Dorp Street  
Cape Town

**The Municipality:**

The Municipal Manager  
Town House Complex  
Plein Street  
Stellenbosch

11.3 Each of the Parties shall be entitled; from time to time by written notice to the other to vary its *domicillium* to any other address within the Western Cape Department of the Republic of South Africa is not a Post Office Box or *Poste Restante*.

11.3.1 if delivered by hand, be deemed to have been duly received by the addressee on the date of delivery; or

11.3.2 if forwarded by pre-paid registered post, be deemed to have been received by the addressee 4 (four) business days after the date of postage.



- 11.4 Notwithstanding anything to the contrary contained in this Agreement, a written notice or communication actually received by one of the Parties from the other Party shall be adequate written notice of communication to such Party.

## 12. WARRANTY OF AUTHORITY

Each Party warrants to each of the other Parties that it has the power, authority and legal right to sign and perform this Agreement and that this Agreement has been duly authorised by necessary actions of its officials or structures, if required, and binding obligations on it in accordance with the terms of this Agreement.

## 13. GENERAL TERMS AND CONDITIONS

### 13.1 *Interpretation of the Agreement*

The law of the Republic of South Africa shall govern the interpretation of the Agreement. If any change in the law renders any material provision of the Agreement illegal or void, either Party may terminate the Agreement immediately.

### 13.2 *Variation*

No amendment, alteration, addition or suspension of any provision of the Agreement shall be of any force, unless reduced to writing and signed by both Parties.

### 13.3 *Waiver*

No waiver of any right in terms of the Agreement shall be binding for any purpose unless expressed in writing and signed by the Party concerned and such waiver shall be effective only in the specific instance and for the purpose given. No failure or delay on the part of either Party in exercising any right precludes any other or further exercise thereof or the exercise of any other right.

### 13.4 *Cession and Invalid Provisions*

A Party may not cede any right or obligation in terms of the Agreement to another person without the other Party's written consent.



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**14. SEVERABILITY**

If any provision of the Agreement is or becomes invalid or unenforceable, such provision shall be divisible and be regarded as *pro non scripto* and the remainder of the Agreement shall be regarded as valid and binding unless materially affected.

**15. RELATIONSHIP**

15.1 This Agreement does not create an employment relationship, partnership, joint venture or agency between the Parties and neither Party shall be liable for the debts of the other Party, howsoever incurred.

15.2 The Municipality has no authority or right to bind the Department to any third party and it shall be liable for any act purporting to so bind the Department.

SIGNED AT CAPE TOWN ON THIS 21 DAY OF JULY 2016

  
\_\_\_\_\_

**THE DEPARTMENT**

(Herein represented by **Ms Jacqui Gooch** in her capacity as **Head of Department**, duly authorised hereto)

**AS WITNESSES:**

1.   
\_\_\_\_\_

2. Saw-Othier  
\_\_\_\_\_

 RAR

SIGNED AT Stellenbosch ON THIS 8<sup>th</sup> DAY OF JULY 2016



**THE MUNICIPALITY**

(Herein represented by **Mr Richard Bosman** in his capacity as **Acting Municipal Manager**, duly authorised hereto)

**AS WITNESSES**

1. 
2. 





**7.6.2**

**SECTION 78 PROCESS FOR AN EXTERNAL  
SERVICE DELIVERY MECHANISM WITH  
REGARD TO PUBLIC TRANSPORT**

**APPENDIX 2**



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# **SERVICE DELIVERY MECHANISMS OF LOCAL GOVERNMENT**

**Utilising the Provincial Sustainable  
Transport Program (PSTP)**



## THIS PRESENTATION:

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- ✿ Distinguishing the service authority and the service provider roles
- ✿ The process for determining an appropriate service delivery mechanism
- ✿ Internal mechanisms
- ✿ External mechanisms

# SERVICE AUTHORITY FUNCTIONS AND SERVICE PROVIDER FUNCTIONS

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# SERVICE AUTHORITY FUNCTIONS

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## Service Authority

A service authority is responsible for “administering” a function. This responsibility should be distinguished from regulation and service provision. For example, municipalities are service authorities for water. The Department of Water Affairs and Forestry functions as a regulator. The service provider could be the municipality but it need not be – as in the case of Mbombela Municipality or the City of Johannesburg. Hence: “A municipality has ... the *right to administer*—the local government matters listed in Part B of Schedule 4 and Part B of Schedule 5” (Section 156 of the Constitution).



# WHAT DO SERVICE AUTHORITIES DO?

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- ✿ Based on legislation, policy and practice in SA, acting as an authority usually implies the following responsibilities:
  - ▶ Adopting an IDP – planning to ensure that the function is effectively administered
  - ▶ Setting Tariffs or Rates – determination of user fees or the imposition of taxes to pay for the provision of the service;
  - ▶ Receipt of Funds and debt control;
  - ▶ Policy – priority setting;
  - ▶ Enacting supply-related legislation (for example, Transport By-Laws);
  - ▶ Performance monitoring of service provision;
  - ▶ Ownership of assets.



# SERVICE PROVIDER FUNCTIONS

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## Service Provider

A service provider is responsible for providing “municipal services” – a term that has recently been defined in the Systems Act and broadly correlates to municipal functions that involve service provision. The service provider can be the municipality itself (if the provision is **internal**) or another entity (if the provision is **external**). The basis for the service provision is established by the Service Authority who remains ultimately responsible for the provision of the service. **Chapter 8 of the Systems Act** deals with service provision in detail.



# SUMMARY OF RESPONSIBILITIES

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## Authority

- ✿ Ensuring access / universal service obligation
- ✿ Planning
- ✿ Regulation
- ✿ Provision
- ✿ Services to industry
- ✿ Regional schemes
- ✿ Duty to provide information

## Provider

- ✿ Duty to provide water services
- ✿ Effectiveness and efficiency
- ✿ Consumer charter
- ✿ Consumer relations
- ✿ Consumer friendly billing
- ✿ Business plan
- ✿ Duty to provide information





# SEPERATION OF REGULATORY AND OPERATIONAL RESPONSIBILITY

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- ✿ Service Authority = Regulatory authority  
= Supervisory responsibility
  
- ✿ Service Provider = Implementing authority  
= Operational responsibility



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# THE PROCESS FOR DETERMINING AN APPROPRIATE SERVICE DELIVERY MECHANISM



# CHOOSING A SERVICE DELIVERY MECHANISM

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- ✿ Municipal Systems Act dictates when a service authority must consider service delivery mechanisms – section 78 assessment
- ✿ Internal and external service delivery mechanism possible

**Internal mechanisms**



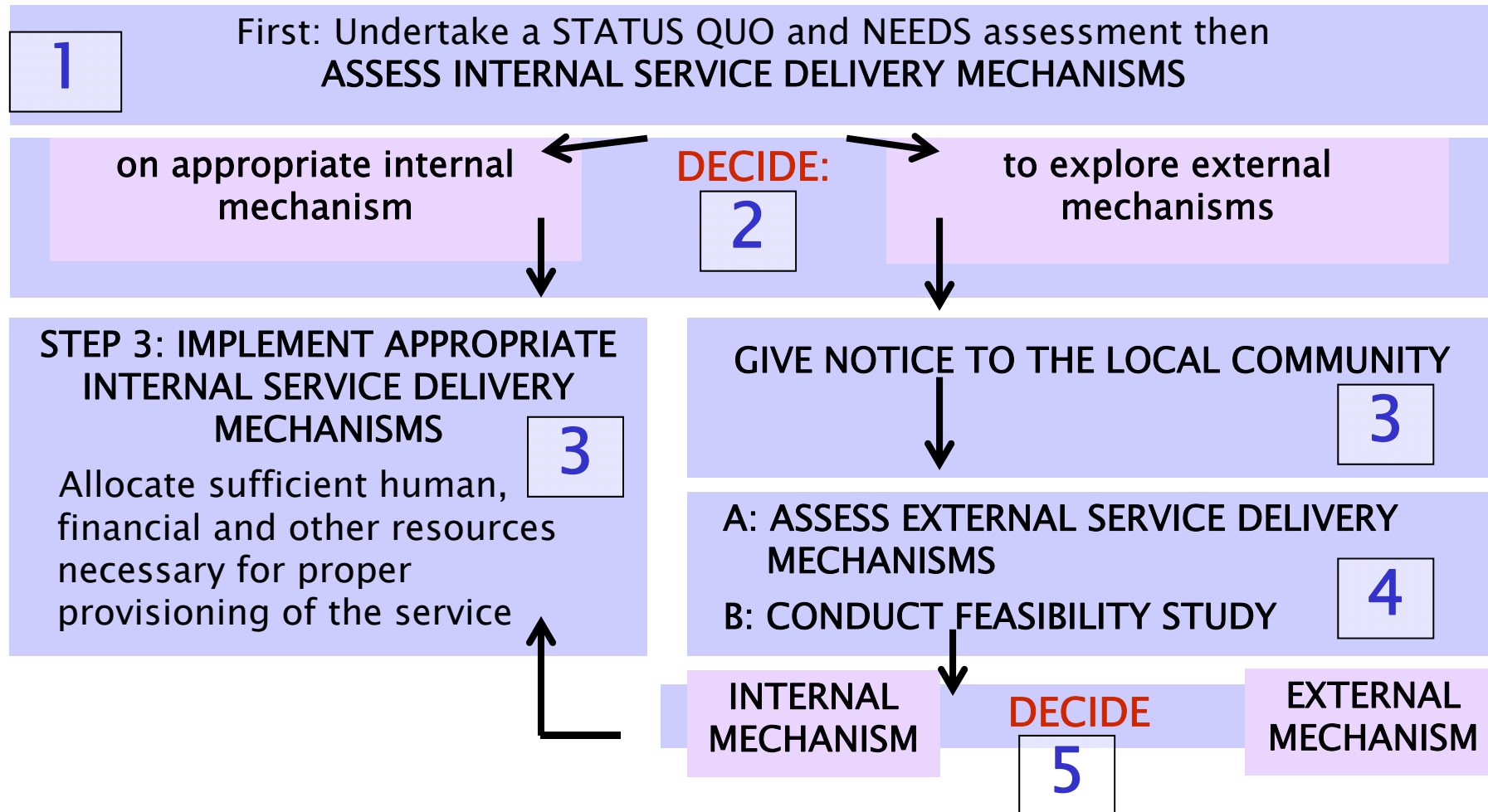
**Inside the municipality**

**External mechanisms**

**Entities outside the municipality**



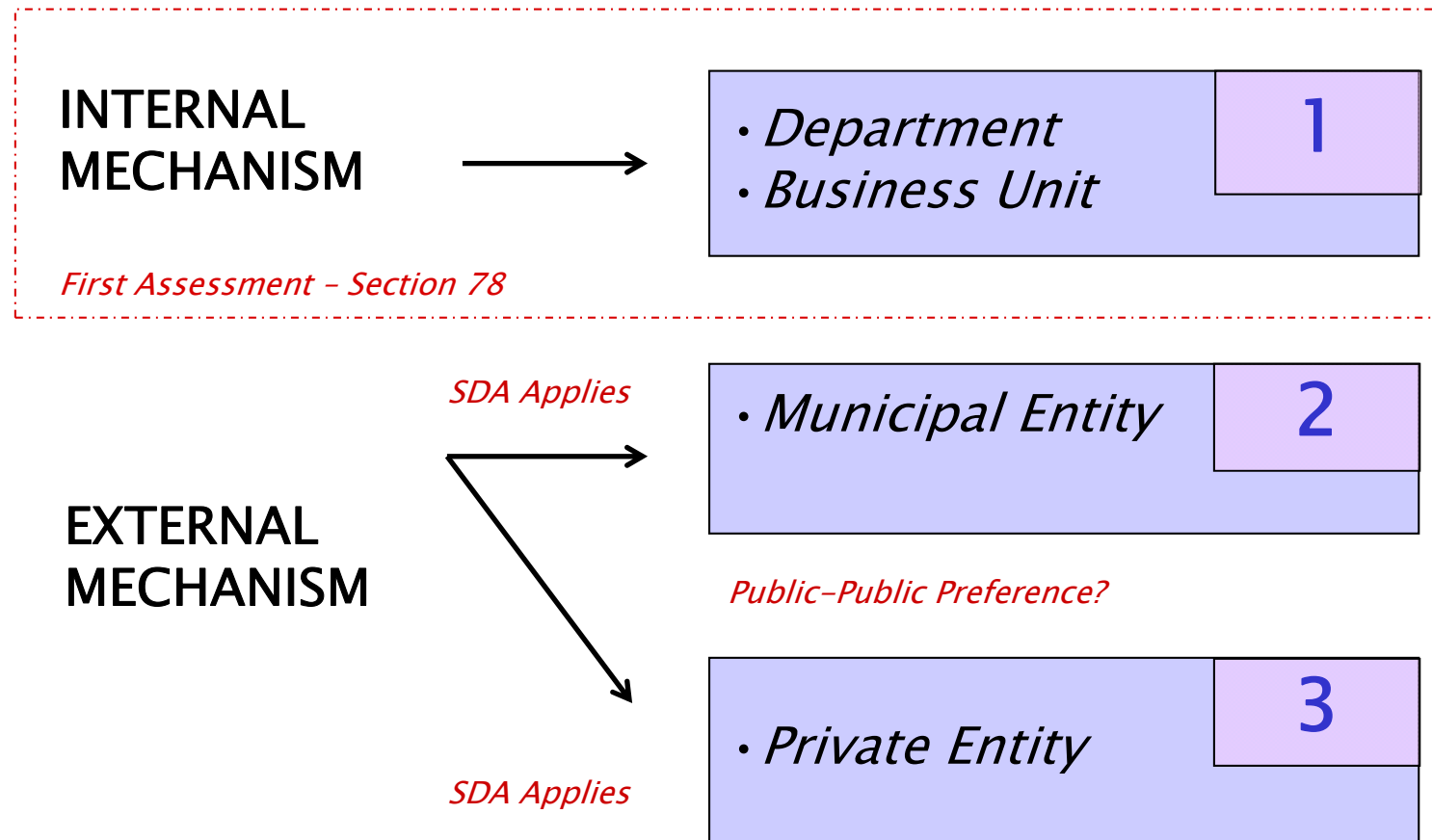
# THE SECTION 78 PROCESS





# THREE BROAD SERVICE PROVISION OPTIO

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# INTERNAL MECHANISMS



# THINGS TO THINK ABOUT WHEN CONSIDERING INTERNAL MECHANISMS

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- ✿ Internal delivery mechanisms are more about appropriate organisational design and performance improvement than financial considerations
- ✿ Effective and efficient administration will, however, improve financial performance
- ✿ A department can reflect many of the characteristics of a business unit and vice versa depending on the way it is governed and structured

# WHAT ARE THE INTERNAL MECHANISMS?

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- ✿ A Department or Administrative Unit within the municipality's administration
- ✿ Business Unit
- ✿ Any other component of the municipality's administration



**Internal  
mechanisms**





# WHAT IS A DEPARTMENT OR ADMINISTRATIVE UNIT?

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- ✿ The Systems Act doesn't provide definitions
- ✿ Can be defined as *“an institutional arrangement where the responsibility for the delivery of a particular service is carried by more than one unit within the administration of a municipality”*
- ✿ Currently it's the most common option
- ✿ The department or administrative unit usually takes responsibility for the technical aspects of the service, while other departments or administrative units take responsibility for other aspects of the service such as financial, legal, social, human resources and the like



# WHAT IS A BUSINESS UNIT?

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- ✿ A business unit –
  - ❑ operates within the municipality’s administration
  - ❑ under council’s control, and
  - ❑ in accordance with operational and performance criteria of Council
- ✿ The Act does not define a ‘business unit’
- ✿ There is no clear legal or academic definition
- ✿ **Can** be defined as *“a ring-fenced unit within the municipal structure operating within a defined framework and fully accountable for all aspects of service delivery”*

# WHAT IS A BUSINESS UNIT?

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- ✿ Similar to a department or administrative unit as it is an integral part of a municipality and does not have a separate legal personality
- ✿ Functions as if it is separate from the municipality
- ✿ Usually is responsible for all aspects of a service, including the technical, financial and legal aspects
- ✿ All income and expenditure is ring-fenced and all functions (including meter reading, billing and credit control) related to the provision of water services may be performed by the business unit
- ✿ Transactions with other departments 'at arms length'
- ✿ The business unit focuses on water services provision and constitutes a holistic approach to rendering the service

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# EXTERNAL MECHANISMS

# EXTERNAL MECHANISMS IN THE CONTEXT OF S78

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- ✿ Challenges / needs have been identified (although not a legislative requirement, a status quo assessment should have been completed and needs going forward determined)
- ✿ Internal mechanism assessment completed, and decision to first assess feasibility of external mechanisms
- ✿ Notice to the community of intention explore external mechanisms has been given

# DIFFERENCE BETWEEN INTERNAL AND EXTERNAL ASSESSMENTS :

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- ✿ Community Consultation
- ✿ Feasibility Study
- ✿ Regulator involvement
- ✿ Deal with issues required in a Service Delivery Agreement to be concluded if an external mechanism is chosen

# THE EXTERNAL MECHANISM OPTIONS

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- ✿ Municipal Entity
- ✿ Another municipality
- ✿ Organ of state (including a traditional authority)

- ✿ CBO      ***Competitive tendering***
- ✿ NGO
- ✿ Any other institution or entity legally competent to operate a business activity

Service Delivery Agreements must be entered into

# STEPS WITHIN THE EXTERNAL MECHANISM PROCESS :

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- ✿ ASSESS legislated external mechanism options against your needs
- ✿ Get VIEWS of community and organised labour on assessment
- ✿ Conduct FEASIBILITY STUDY of preferred option to show it is affordable and there is benefit in pursuing the option



## WHILE DOING THE ASSESSMENT CONSIDER:

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- ✿ Output specifications (what is it that you want the service provider to do?)
- ✿ Risk Transfer (financial/operational/political/etc)
- ✿ Contract Structure
- ✿ Structure of relationship with service provider
- ✿ Term of contract (relative to risk transfer)
- ✿ Legislated criteria



# THE FEASIBILITY STUDY:

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- ✿ After assessing options, choose the preferred option, and test the feasibility of this option against the optimal internal mechanism
  
- ✿ Feasibility Study will include:
  - ▶ Developing a financial model
  - ▶ Assessing pros and cons of option
  - ▶ Testing the outcomes against each other
  - ▶ Testing sensitivity of assumptions
  - ▶ Addressing legislated criteria



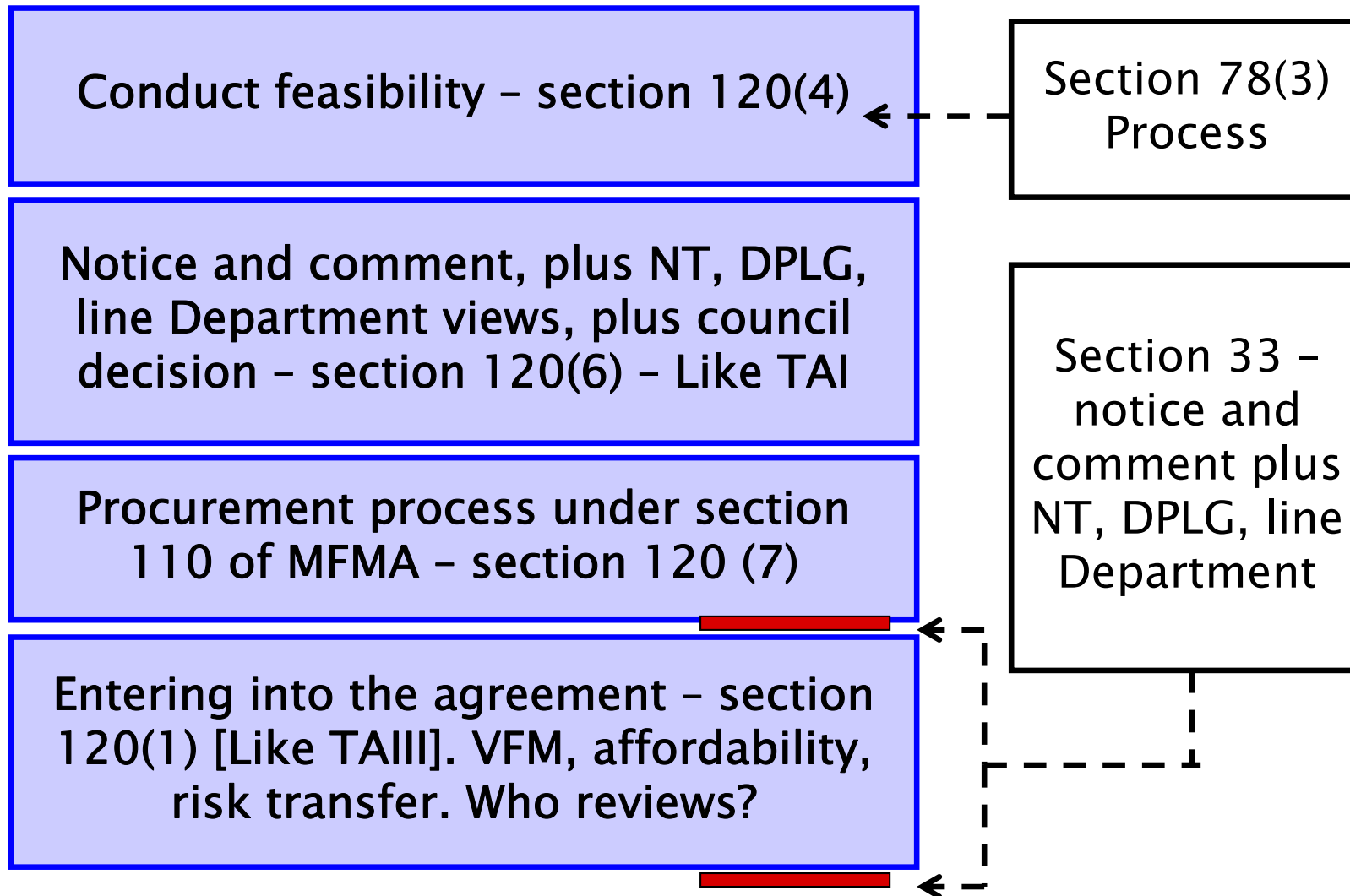
# PUBLIC–PUBLIC PREFERENCE?

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- ✿ Procurement
  - ▶ The exemption is a mixed blessing – it saves *initial* costs but reduces municipal bargaining power (*ultimate* costs?)
  
- ✿ Partnership with Water Boards
  - ▶ PFMA compliance and strict National Treasury supervision – eg Emfuleni’s transaction with Rand Water.
  
- ✿ Water Services Act
  - ▶ Section 19 Preference is probably not meaningful – eg of Joburg Water.



# PUBLIC PRIVATE PARTNERSHIP: WHAT DOES 120 of the MFMA REQUIRE?





# PROCUREMENT OF SERVICE PROVIDERS

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- ✿ Key risks:
  - ▶ Interaction with bidders;
  - ▶ Assessments of compliance;
  - ▶ Interaction between technical advisors and adjudicators;
  - ▶ Reasons for decision;
  - ▶ Change of scope or price during the negotiating phase.



# THE SERVICE DELIVERY AGREEMENT (“SDA”)

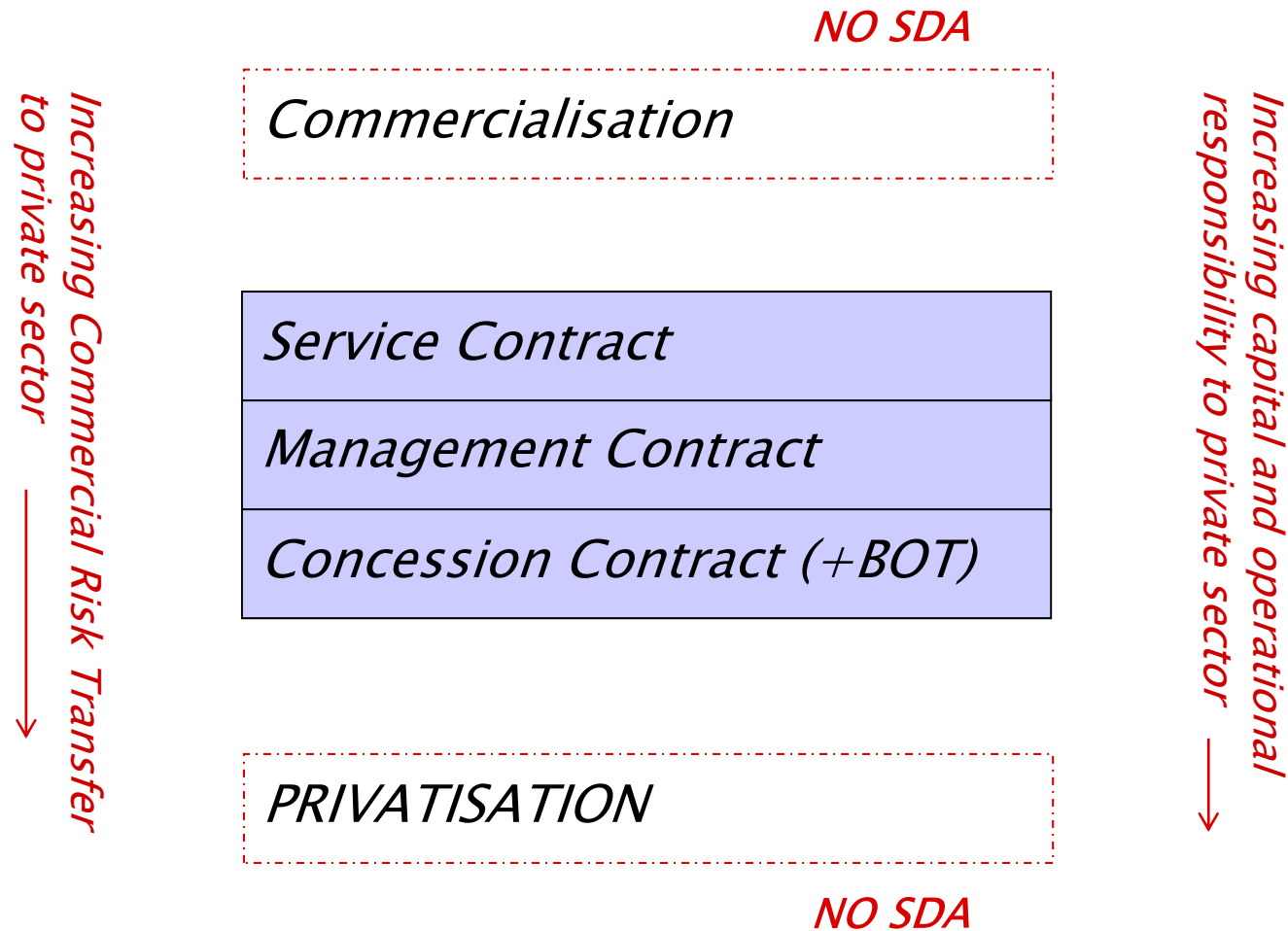
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- ✿ Key difference between the internal and external mechanism is the SDA.
- ✿ An SDA is the agreement which regulates the relationship between the WSA and the WSP. It sets out who has to what and when.
- ✿ There are “generic types” of SDAs, but each WSA should make sure its contract is appropriate for its specific needs, allocates risks and adequately allows the WSA to “ensure service deliver”



# CONTEXT: KINDS OF SDAs

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# WHICH SDA FOR YOU?

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- ✿ The type of output specification (what it is the Municipality wants to achieve through the service delivery mechanism) and the risk transfer will influence WHO (which external mechanism) is appropriate to respond to your needs
- ✿ Let the communities needs drive the assessment of external mechanisms, rather than the other way around!
- ✿ Review s 81 of the Systems Act





# CORPORATISE OR NOT?

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## CORPORATISE

### Cost-benefit Analysis:

- Nature of the service  
*“business practices”*?
- Need for close **policy control**
- Quality of *status quo* – deficits?
- **Failure** to discharge resp?
- Need for **capital**
- **Special** objectives

### Management and Finance

- ME’s capacity to **borrow**.
- Funding from other Government spheres
- Internal management expertise
- Section 79(a) –allocate to internal

7.6.3	<b>AMENDMENT OF CONTRACT B/SM 21/16: THE OPERATING AND MANAGEMENT OF THE LANDFILL SITE (CELL 3) FOR A PERIOD OF 6 MONTHS</b>
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**1. PURPOSE OF THE REPORT**

To obtain Council's approval for the extension of the contract of Interwaste (Pty) Ltd (B/SM 21/16) for a period of 6 months as per Section 116(3) of the Municipal Finance Management Act (Act 56 of 2003) (Refer to **APPENDIX 1**).

**2. BACKGROUND**

Interwaste was appointed through B/SM 21/16 for the operating and management of Stellenbosch's Devon Valley Landfill site (cell 3) for a period of 12 months.

Their scope of works for this project included:

- Managing day-to-day operations on site (including waste minimisation activities)
- Waste deposition and compaction including the provision and placement of cover material
- Control of nuisances
- Operating the weighbridge
- Providing adequate staff on site for site supervision, gate controlling, weighbridge operating and tipface managing
- Maintaining access control on site for pedestrians and vehicles
- Providing adequate security on site
- Providing the required plant and machinery on site
- Monthly reporting of weighbridge statistics including waste types, quantities and sources of waste
- Attending and participating in quarterly Landfill Monitoring Committee meetings

The offer and rates indicated by the service provider on their submission dated 25 May 2015 was accepted by the Municipality. Monthly rates indicated in Section C2.2 Pricing Schedule of the Tender Contract B/SM 21/16 by Interwaste amounted to R 377,131.00 (excl. VAT) per month with an annual cost of R 4,525,572.00 (excl. VAT) (**APPENDIX 2**).

Work on this contract started 01 October 2015. The contract thus expires on 30 September 2016.

**3. DISCUSSION**

The Stellenbosch Landfill is required to operate in accordance with the conditions set forth in its Permit (16/2/7/G203/D16/Z1/P331) issued by then Department of Water Affairs and Forestry (DWAFF) on 29 January 1999 and comply with all requirements of the National Environmental Management: Waste Act (Act 59 of 2008).

All waste disposed of on the landfill site must be compacted and covered with cover material on a daily basis. The Contractor is responsible for the provision and co-ordination of all vehicles, plant, equipment, security and

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staff and this has to be performed in a manner that will ensure all operations are carried out in a safe, orderly and efficient manner.

It recently came to this Department's attention that the remaining airspace left for cell 3 is approximately two years. This information required the Department to come up with a strategy to extend cell 3's lifespan as much as possible. An investigation confirmed that the most effective way to do this is to implement both aggressive waste minimisation strategies, as well as to appoint a contractor on a multi-year basis. When a contractor is appointed on a multi-year basis, it will be in their best interest to preserve as much airspace as possible and thereby they will extend the lifetime of the site.

As it is the first time ever that this Municipality will be putting out a tender of this magnitude for the operation and management of the landfill site, the specifications are of unparalleled importance. The specifications thus need to be completely reworked and aggressive waste minimisation strategies added. The need for a six month extension before the 5 year tender can be advertised is because:

- it has only recently been confirmed by SCM that a contractor may be appointed for a 5 year period;
- a Section 33 process of the MFMA has to be completed when appointing a contractor for a period exceeding 36 months which includes approval of the tender by the Council. It would be high risk to depend on a new Council to approve a tender on their first sitting in September 2016; should the tender not be approved, there will be no contract in place for the management of the landfill site; and
- the process of appointing a contractor for a 5 year period includes a 60 day tender advertisement period.

Since their appointment, Interwaste has proven that they are capable to manage the landfill site in accordance with all statutory requirements. Interwaste has also indicated that they are willing to manage and operate the landfill site for the period 1 October 2016 to 30 March 2017 at the monthly rate that was tendered on 25 May 2015 plus CPI escalation of 5.96% (the average CPI calculated over a 12 month basis, July 2016 to June 2017) (**APPENDIX 3**).

The current monthly rate of R 377,131.00 per month (excl VAT) would thus escalate with R 22,477.00 to R 399,608.00 (excl VAT). Even with the 5.96% escalation of the tendered rate, the monthly costs are still lower than the second lowest price submitted by a competing landfill operator in May 2015 which amounted to R 429,589.00 (excl VAT) per month.

It is requested that an extension of 6 months be given to this contract to the value of R 2,397,648.00 (excl. VAT) in order for the Solid Waste Management Department to improve on and fine-tune the current specifications for the operation and management of the landfill site so that it can be scaled up to a 5 year tender that will be advertised and open for public tender.

Should the 5 year tender for the operation of the landfill site be awarded prior to the 6 months' extension elapsing, the extension can be terminated by giving two months' notice as agreed upon by Interwaste's Managing Director (**APPENDIX 3**).

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In terms of S116(3) of the MFMA a contract or agreement may be amended, but only after:

- a) the reason for amendment has been tabled in Council; and
- b) the local community has (i) been given reasonable notice of the intention to amend the contract or (ii) been invited to submit representations to the municipality.

The only amendment of the contract of agreement would be increasing the time period of the appointed contractor from 12 months to a maximum of 18 months.

#### **4. COMMENTS FROM RELEVANT DIRECTORATES**

##### **4.1 Directorate: Finance**

Finance supports the item.

#### **RECOMMENDED**

- (a) that Council note the reasons for the proposed extension of the contract/agreement for a period of 6 months; and
- (b) that the local community be given reasonable notice of the intention to extend the contract/agreement and be invited to submit representations to the municipality.
- (c) that the final recommendation after representation be submitted to Council for approval.

#### **5. FURTHER COMMENTS**

##### **5.1 Directorate: Engineering Services**

The item was approved in principle (**APPENDIX 2**) i.t.o. Delegation 1 of the approved System of Delegations.

A public participation process was followed by means of advertisements that were placed in Die Burger and Cape Argus on 27 August 2016 with closing date 16 September 2016 (**APPENDIX 4**). No comments were received.

##### **5.2 LEGAL COMMENT**

**Directorate: Strategic & Corporate Services (Senior Legal Advisor: Ms EA Rhoda)**

The item provides that there is a need for a six months extension before the 5 year tender can be advertised. It is important to note that the extension of the contract B/SM 21/6 must comply with the Municipal Finance Management Act and the Municipal Systems Act. Section 116(3) of the Municipal Finance Management Act no. 56 of 2003 (MFMA) provides that, a contract or agreement procured through the supply chain management policy of the municipality may be amended by the parties, but only after—

- (a) The reasons for the proposed amendment have tabled in the council of the municipality; and

- (b) The local community-
  - (i) has been given reasonable notice of the intention to amend the contract or agreement; and
  - (ii) has been invited to submit representations to the municipality.

The item furthermore provides that there is a need for a six months extension before the 5 year tender can be advertised. Section 33 of the MFMA makes provision for contracts having future budgetary implications. In terms of Section 33, any contract which will incur financial obligations beyond the relevant budget cycle requires a specific process to be followed. Section 33 provides:

- “(1) A municipality may enter into a contract which will impose financial obligations on the municipality beyond a financial year , but if the contract will impose financial obligations on the municipality beyond the three years covered in the annual budget for that financial year, it may do so only if-
  - (c) the municipal manager, at least 60 days before the meeting of the municipal council at which the contract is to be approved-
    - (iii) has, in accordance with section 21 A of the Municipal Systems Act-
      - (aa) made public the draft contract and an information statement summarising the municipality’s obligations in terms of the proposed contract; and
      - (bb) invited the local community and other interested persons to submit to the municipality comments or representations in respect of the proposed contract; and
      - (iv) has solicited the views and recommendations of-
        - (aa) the National Treasury and the relevant provincial treasury;
        - (bb) the national department responsible for local government and
        - (cc) if the contract involves the provision of water, sanitation, electricity or nay other service as may be prescribed by the responsible national department
    - (d) the municipal council has taken into account-
      - (v) The municipality’s projected financial obligations in terms of the proposed contract for each financial year covered by the contract;
      - (vi) The impact of those financial obligations on the municipality’s future municipal tariffs and revenue;
      - (vii) Any comments or representations on the proposed contract received from the local community and other interested persons; and
      - (viii) Any written views and recommendations on the proposed contract by the National Treasury, the relevant provincial treasury, the national department responsible for local government and any national department referred to in paragraph(a)(ii)(cc); and
  - (c ) the municipal council has adopted a resolution in which-
    - (iv) It determines that the municipality will secure a significant capital investment or will derive a significant financial economic or financial benefit from the contract;
    - (v) It approves the entire contract exactly as it is to be executed; and

- (vi) It authorises the municipal manager to sign the contract on behalf of the municipality.”

The prescriptive legislative processes outlined above thus include public participation as well as consideration of the *draft contract* by the council, prior to the contract being concluded.

The item is supported.

### RECOMMENDED

that Council approves the extension of the contract/agreement (BSM21/16) for a period of 6 months to the value of R 2,397,648.00 (excl. VAT) in terms of the MFMA S116(3) (a).

<b>Meeting: Ref No:</b>	4 <sup>th</sup> Council: 2016-11-23 6/3/3/6 x 16/5/3	<b>Submitted by Directorate: Author: Referred from:</b>	Infrastructure W Pretorius Mayco: 2016-11-16
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**7.6.3**

**AMENDMENT OF CONTRACT B/SM 21/16:  
THE OPERATING AND MANAGEMENT OF  
THE LANDFILL SITE (CELL 3)**

**APPENDIX 1**

**Unsolicited bids**

**113.** (1) A municipality or municipal entity is not obliged to consider an unsolicited bid received outside its normal bidding process.

(2) If a municipality or municipal entity decides to consider an unsolicited bid received outside a normal bidding process, it may do so only in accordance with a prescribed framework. 5

(3) The framework must strictly regulate and limit the power of municipalities and municipal entities to approve unsolicited bids received outside their normal tendering or other bidding processes.

**Approval of tenders not recommended**

10

**114.** (1) If a tender other than the one recommended in the normal course of implementing the supply chain management policy of a municipality or municipal entity is approved, the accounting officer of the municipality or municipal entity must, in writing, notify the Auditor-General, the relevant provincial treasury and the National Treasury and, in the case of a municipal entity, also the parent municipality, of the reasons for deviating from such recommendation. 15

(2) Subsection (1) does not apply if a different tender was approved in order to rectify an irregularity.

**Implementation of system**

**115.** (1) The accounting officer of a municipality or municipal entity must— 20

(a) implement the supply chain management policy of the municipality or municipal entity; and

(b) take all reasonable steps to ensure that proper mechanisms and separation of duties in the supply chain management system are in place to minimise the likelihood of fraud, corruption, favouritism and unfair and irregular practices. 25

(2) No person may impede the accounting officer in fulfilling this responsibility.

**Contracts and contract management**

**116.** (1) A contract or agreement procured through the supply chain management system of a municipality or municipal entity must—

(a) be in writing; 30

(b) stipulate the terms and conditions of the contract or agreement, which must include provisions providing for—

(i) the termination of the contract or agreement in the case of non- or under-performance;

(ii) dispute resolution mechanisms to settle disputes between the parties; 35

(iii) a periodic review of the contract or agreement once every three years in the case of a contract or agreement for longer than three years; and

(iv) any other matters that may be prescribed.

(2) The accounting officer of a municipality or municipal entity must—

(a) take all reasonable steps to ensure that a contract or agreement procured through the supply chain management policy of the municipality or municipal entity is properly enforced; 40

(b) monitor on a monthly basis the performance of the contractor under the contract or agreement;

(c) establish capacity in the administration of the municipality or municipal entity— 45

(i) to assist the accounting officer in carrying out the duties set out in paragraphs (a) and (b); and

(ii) to oversee the day-to-day management of the contract or agreement; and



- (d) regularly report to the council of the municipality or the board of directors of the entity, as may be appropriate, on the management of the contract or agreement and the performance of the contractor.
- (3) A contract or agreement procured through the supply chain management policy of the municipality or municipal entity may be amended by the parties, but only after— 5
- (a) the reasons for the proposed amendment have been tabled in the council of the municipality or, in the case of a municipal entity, in the council of its parent municipality; and
- (b) the local community—
- (i) has been given reasonable notice of the intention to amend the contract or agreement; and 10
- (ii) has been invited to submit representations to the municipality or municipal entity.

#### **Councillors barred from serving on municipal tender committees**

117. No councillor of any municipality may be a member of a municipal bid committee or any other committee evaluating or approving tenders, quotations, contracts or other bids, nor attend any such meeting as an observer. 15

#### **Interference**

118. No person may—
- (a) interfere with the supply chain management system of a municipality or municipal entity; or 20
- (b) amend or tamper with any tenders, quotations, contracts or bids after their submission.

#### **Competency levels of officials involved in municipal supply chain management**

119. (1) The accounting officer and all other officials of a municipality or municipal entity involved in the implementation of the supply chain management policy of the municipality or municipal entity must meet the prescribed competency levels. 25
- (2) A municipality and a municipal entity must for the purposes of subsection (1) provide resources or opportunities for the training of officials referred to in that subsection to meet the prescribed competency levels. 30
- (3) The National Treasury or a provincial treasury may assist municipalities and municipal entities in the training of officials referred to in subsection (1).

### ***Part 2: Public-private partnerships***

#### **Conditions and process for public-private partnerships**

120. (1) A municipality may enter into a public-private partnership agreement, but only if the municipality can demonstrate that the agreement will— 35
- (a) provide value for money to the municipality;
- (b) be affordable for the municipality; and
- (c) transfer appropriate technical, operational and financial risk to the private party. 40
- (2) A public-private partnership agreement must comply with any prescribed regulatory framework for public-private partnerships.
- (3) If the public-private partnership involves the provision of a municipal service, Chapter 8 of the Municipal Systems Act must also be complied with.
- (4) Before a public-private partnership is concluded, the municipality must conduct a feasibility study that— 45
- (a) explains the strategic and operational benefits of the public-private partnership for the municipality in terms of its objectives;
- (b) describes in specific terms—
- (i) the nature of the private party's role in the public-private partnership; 50
- (ii) the extent to which this role, both legally and by nature, can be performed by a private party; and

**7.6.3**

**AMENDMENT OF CONTRACT B/SM 21/16:  
THE OPERATING AND MANAGEMENT OF  
THE LANDFILL SITE (CELL 3)**

**APPENDIX 2**

STELLENBOSCH MUNICIPALITY

CONTRACT No B/SM: 21/16

THE OPERATING AND MANAGEMENT OF THE LANDFILL SITE FOR THE PERIOD OF 12 MONTHS

**C2.2 Pricing Schedule**

The Tenderer is required to specify the fee/rate to be charged per category, which will be used for pricing evaluation purposes.

Item No.	Description	Monthly Rate	Annual Cost
1.	Operation and Management of Stellenbosch Landfill Site from 01 September 2015 until 31 August 2016	R 377 131 -00	R 4525 572-00
TOTAL EXCLUDING VAT			R 4525 572-00
VAT			R 633 580-08
TOTAL INCLUDING VAT			R 5 159 152-08

STELLENBOSCH MUNICIPALITY  
SUPPLY CHAIN MANAGEMENT

2 8 JUL 2015

**BID OPEN**

**7.6.3**

**AMENDMENT OF CONTRACT B/SM 21/16:  
THE OPERATING AND MANAGEMENT OF  
THE LANDFILL SITE (CELL 3)**

**APPENDIX 3**

**Charlotte Nell**

---

**From:** Leon Grobbelaar <Leong@interwaste.co.za>  
**Sent:** 08 August 2016 06:47 PM  
**To:** Charlotte Nell  
**Cc:** Saliem Haider; Silvia Pretorius; Alison Norton; Foreman Disposal  
**Subject:** Re: Extension of contract B/SM 21/16

Dear Charlotte  
As discuss, in agreement.  
Regards

Sent from my iPhone

On 08 Aug 2016, at 6:37 PM, Charlotte Nell <[Charlotte.Nell@stellenbosch.gov.za](mailto:Charlotte.Nell@stellenbosch.gov.za)> wrote:

Good evening Leon,

Thank you for your swift response while on leave. Would you also agree to same conditions below (extension of contract with CPI escalation) should we wish to extend the contract with up to 12 months?

According to <http://www.statssa.gov.za/publications/P0141/P0141June2016.pdf> the average CPI inflation figures over the past 12 months (July 2015 to June 2016) is 5.96%. The current monthly rate of R429,929.34 per month (incl VAT) would thus escalate with R 25,623.79 to R 455,553.13 (incl VAT) should an escalation of 5.96% be applied. Do you agree with this? If so, we will table the request to Council who will determine whether the CPI escalation is acceptable.

If we need to cancel the contract prior to the 12 month extension mark we will give two month's notice.

Kind regards,  
**Charlotte Nell**  
*Principal Technician: Waste Management and Disposal  
Engineering Services*

T: +27 21 808 8216 • C: +27 72 448 2992 • F: +27 21 883 9874

---

**From:** Leon Grobbelaar [[Leong@interwaste.co.za](mailto:Leong@interwaste.co.za)]  
**Sent:** Monday, August 08, 2016 2:47 PM  
**To:** Charlotte Nell  
**Cc:** Saliem Haider; Silvia Pretorius; Alison Norton; Foreman Disposal  
**Subject:** Re: Extension of contract B/SM 21/16

Dear Charlotte  
Thank you for the mail.  
Happy to accept if our price can be escalated with CPI escalation going forward for the next six months.  
Kind Regards  
Leon Grobbelaar

Sent from my iPhone

**Charlotte Nell**

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**Sent:** 08 August 2016 06:47 PM  
**To:** Charlotte Nell  
**Cc:** Saliem Haider; Silvia Pretorius; Alison Norton; Foreman Disposal  
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Sent from my iPhone

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T: +27 21 808 8216 • C: +27 72 448 2992 • F: +27 21 883 9874

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Leon Grobbelaar

Sent from my iPhone

**7.6.3**

**AMENDMENT OF CONTRACT B/SM 21/16:  
THE OPERATING AND MANAGEMENT OF  
THE LANDFILL SITE (CELL 3)**

**APPENDIX 4**



## NOTICE

### NOTICE IN TERMS OF SECTION 116(3) OF THE LOCAL GOVERNMENT: MUNICIPAL FINANCE MANAGEMENT ACT, 2003 (ACT 56 OF 2003) FOR THE PROPOSED AMENDMENT OF THE EXISTING AGREEMENT WITH INTERWASTE PTY LTD FOR THE OPERATING AND MANAGEMENT OF STELLENBOSCH'S DEVON VALLEY LANDFILL SITE FOR A PERIOD OF 12 MONTHS

Notice is hereby given in terms of Section 116 (3) (a) and (b) of the Local Government Municipal Finance Management Act 2003 (Act 56 of 2003) that it is the intention of the Stellenbosch Municipality to amend the existing contract:

Number: B/SM 21/16

Description: PROVISION OF PROFESSIONAL SERVICES FOR THE OPERATING AND MANAGEMENT OF STELLENBOSCH'S DEVON VALLEY LANDFILL SITE.

Contractor: INTERWASTE (PTY) LTD

Reasons for the proposed amendment:

The proposed amendment of the contract is to provide for the extension of the services and support for a period ending 30 March 2017.

Notice is hereby further given in terms of Section 21 and 21A of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000) that the local community and affected parties are invited to submit comments or representations on the proposed amendment of the contract. Persons who are physical disabled or who cannot read or write but wish to participate in the process, may come during office hours to the Municipal Offices, Plein Street, Stellenbosch where a staff member will assist that person to transcribe that person's comments or representations.

Comments and/or representations must be submitted to the following email address [s116\\_contracts@stellenbosch.gov.za](mailto:s116_contracts@stellenbosch.gov.za) with the subject line entitled "B/SM 21/16: COMMENTS ON NOTICE OF AMENDMENT OF EXISTING AGREEMENT WITH INTERWASTE PTY LTD"

The closing date and time for the submission of representations and/or comments is no later than **16/09/2016, at 12:00**. Any comments or representations received after this time and date will not be considered.

All enquiries regarding this intent can be directed to the following official.

Name & Surname	Saliem Haider
Telephone Number	021 8088241
E-mail address	Saliem.Haider@stellenbosch.gov.za
Physical address	Ecclesia Building Plein Street Stellenbosch 7600

**Richard Bosman**  
Acting Municipal Manager

*[Handwritten signature]*  
23/08/2016





Stellenbosch

**AMPTELIKE BESTELLING  
OFFICIAL ORDER**

# Stellenbosch

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

17. STELLENBOSCH 7599  
 021 808-8520  
 021 808-8688

BESTEL NR. / ORDER NO.  
**326323**

DATUM / DATE  
**08/09/2016**

**INDEPENDENT NEWSPAPERS (PTY) L**  
**P O BOX 61471**  
**MARSHALLTOWN**

**2107**

KREDITEUR NR.  
CREDITORS NO. **001602**

KONTAK PERSOON / CONTACT PERSON  
**CHARLOTTE CRONJE**  
 Requisition No. **1019749**

REKWIISIË REQUISITION	LYN LINE	VOORRAAD NR. STOCK NO.	BESKRYWING / DESCRIPTION	POS NR. / VOTE NO.	HOLVELLEHD. QUANTITY	PRYSE SONDER BTW PRICES WITHOUT VAT	BTW/VAT	TOTAAL PRYS TOTAL PRICE
			<b>ADVERTISEMENT: B/SW 21/16</b> <b>6 S 116 PLACED IN NEWSPAPERS</b>		<b>1</b>	<b>4286.71</b>	<b>600.13</b>	<b>4886.84</b>

NAMENS / FOR: **STELLENBOSCH**  
MUNICIPALITY / UMASIPALA / MUNICIPALITY

*Marius Schep*  
ANDTEREMING  
DEPUTY  
MUNICIPAL COUNCIL MEMBER

TOTAAL  
TOTAL **4886.84**

deposters 09.20

APPENDIX 4





Stellenbosch

AMPTELIKE BESTELLING  
OFFICIAL ORDER

**Stellenbosch**

MUNISIPALITEIT • UMASIPALA • MUNICIPALITY

• 17, STELLENBOSCH 7500  
T 021 806-8520  
F 021 806-8588

BESTEL NR. / ORDER NO.  
1204/11

DATUM / DATE  
09/07/11

KREDITEUR NR. / CREDITORS NO.  
000000

KONTAK PERSOON / CONTACT PERSON  
CHARLOTTE SWARTZ  
021 806 8520

ADVERTISER / ADVERTISER  
STELLENBOSCH  
021 806 8520

RYKSWISSELYN / QUESTIONNAIRE	VOORRAAD NR. / STOCK NO.	BESKRYWING / DESCRIPTION	POS NR. / VOTE NO.	HOEWEELEID / QUANTITY	PRYSE SONDER BTW / PRICES WITHOUT VAT	BTW/VAT	TOTALE PRYS / TOTAL PRICE
		ADVERTISMENTE SWARTZ PLACED IN NEWSPAPERS OF	21/16	1	1553.56		1553.56

*Correct Copy*

NAMENS / FOR:  
STELLENBOSCH

*Mantla Sch*

AMPTELIKE BESTELLING  
MUNISIPALITEIT  
UMASIPALA

TOTAAL TOTAL

## BEVESTIGING VAN BESTELLING

# MEDIA

**Bestelnr.:**  
19388495

**Datum:**  
24/08/2016

**Reg. Nr:** 1950/038385/07 **BTW Nr:** 4150102228

 Media 24 (Pty) Ltd  
 1111 1111 1111 1111

 1111 1111 1111 1111  
 1111 1111 1111 1111

 MUNICIPALITEIT STELLENBOSCH  
 POSBUS 17  
 STELLENBOSCH  
 7599

**Rekeningnavrae:** Faziela Daniels

**Tel:** Tolvry:

**Faks:**
**E-pos:** faziela.daniels@media24.com

**Verwysing:**
**Rekening Nr:**

300012936437

**Kliënt Reg No:**
**Kliënt BTW Nr:**

4700102181

Bladsy 1 van 2

Datum	Beskrywing	Tarief	Bedrag	Afslag	Netto	BTW	Totaal (R)
27-08-2016	Die Burger Wes - CLASSDSP (CLASSDSP) B/SM 21"16 toa grootte 15 CM x 3 kol. kleur FC plasing 1	0.00	4,553.55	0.00	4,553.55	637.50	5,191.05
						<b>Totaal (ZAR)</b>	<b>5,191.05</b>

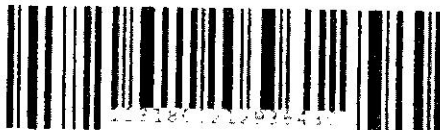
Terme: 30 Dae ME

Vervolg op volgende bladsy

**BETALINGSADVIES**

Belangrik: Hierdie advies moet altyd u betaling vergeesel

**BANKBESONDERHEDE:**
**Bank:** ABSA  
**Rekeningnommer:** 0550000059  
**Takkode:** 006009  
**Tak:** HEERENGRACHT

 Pay @ word aanvaar by: Shoprite, Checkers, Spar, OK, Pick n Pay,  
 Usave, Boxer Superstores


4150102228

# MEDIA

**Reg Nr:** 1950/038385/07 **BTW Nr:** 4150102228

Media 24 (Pty) Ltd

1111 1111 1111 1111

**ANDER BETALINGSOPSIES: Kaartbetalings**

Datum	Rekeningverw.	Bedrag verskuldig
24-08-2016	300012936437	5,191.05

Betalings moet altyd u Rekening Verwysing aandui

7.6.4	<b>THE THIRD GENERATION INTEGRATED WASTE MANAGEMENT PLAN (IWMP) FOR STELLENBOSCH MUNICIPALITY</b>
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**1. PURPOSE OF REPORT**

To submit the proposed Third Generation Integrated Waste Management Plan (IWMP) (**APPENDIX 1**) for Stellenbosch Municipality to Council for consideration and in-principle approval, prior to going out for comment from the provincial authorities and the public.

**2. BACKGROUND**

In terms of the National Environmental Management: Waste Act (Act 59 of 2008) (NEM:WA), each municipality is required to compile an integrated waste management plan and submit to provincial government (D:EA&DP) for assessment, the recommendations of which must be incorporated into the final IWMPs, before being submitted to the municipal council for approval and implementation.

The manner in which the IWMPs are developed must be consultative and municipalities are required to follow the prescriptions of Section 29 of the Municipal Systems Act. Municipalities are obliged to integrate their IWMPs into their integrated development plans (IDP).

**3. DISCUSSION**

Stellenbosch Municipality is required to develop an Integrated Waste Management Plan (IWMP) for the period 2017-2022. This document is an interim planning document for the period 2015-2016, and 2017-2022, which has been developed to lay the foundation for Stellenbosch Municipality's 2017 – 2022 "third generation" Integrated Waste Management Plan (IWMP). The primary objective of an IWMP is to outline, integrate and optimise waste management plans within a municipality as required by the National Environment Management: Waste Act (NEM:WA, No 59 of 2008). The main goal of this IWMP document is to take stock of the current state of waste management in Stellenbosch Municipality and highlight current challenges, present plans for immediate interventions and present proposals for potentially viable alternative waste management solutions that require detailed investigation.

Stellenbosch Municipality faces an immediate challenge: the current landfill at Devon Valley has limited airspace available, with estimates indicating that in as early as two to three years' time it will be necessary to rely on disposal solutions outside of the municipal boundaries, i.e. facilities of other municipalities. The biggest risks identified for Stellenbosch relates to cost of inaction, and attendant heavy reliance on the availability of external landfill sites for disposal of residual wastes and affordability of large-scale treatment processes which might prove unaffordable for Stellenbosch.

Transitioning from a predominantly landfill-based waste management system to a more sustainable, integrated waste management system requires a highly coordinated approach involving a number of stakeholders and departments. Key areas this IWMP therefore seek to address identification of what is required in terms of adequate financial resources, as well as coherent planning and implementation of programmes. This requires a

---

significant review of the staffing of the solid waste department in terms of staff numbers and roles, and efforts to ensure alignment of solid waste management activities with Stellenbosch Municipality's goals of achieving good governance and compliance, and its vision to be the greenest municipality and preferred investment destination in the Western Cape.

Stellenbosch Municipality has achieved a number of milestones since the commencement of the implementation of its second generation IWMP in 2010, such as:

- (i) Improved service delivery (90% of households are now receiving regular waste services).
- (ii) Compliance: Stellenbosch has achieved compliant, lined disposal at Devon Valley. The rehabilitation process for the closed landfill cells at Devon Valley has commenced.
- (iii) Improved waste data to allow for informed diversion initiatives. Interventions including installation of a new weighbridge at the landfill site, lift loggers on the collection vehicles (both in 2013), and a waste characterisation study (conducted in 2012) have resulted in an informed basis for waste management decision making.

Priority wastes that are currently landfilled but require diversion are builders' rubble, soil and domestic waste due to their high volumes; garden waste due to relative ease of diversion and its propensity for contributing to climate change through emission of greenhouse gases when decomposing in landfill. A number of projects for diversion of these wastes from landfill have already commenced, including:

- A pilot project for production of compressed earth blocks (CEBs) from soil (clay) and builders' rubble at Devon Valley.
- Chipping of garden waste and transfer offsite for composting by a private contractor.
- A pilot separation-at-source programme for domestic waste, with the municipality providing clear bags and a collection service to residents in middle to high-income areas. The recyclables collected are then sent across the municipal boundary to the nearest integrated waste management facility - the City of Cape Town's Kraaifontein facility.

Although these initiatives are expected to lead to some diversion of waste from landfill, this does not constitute the significant diversion required. To this end, Stellenbosch sets out to identify plans and projects that could lead to more substantial diversion of waste from landfill and meet the recycling targets set by the National Waste Management Strategy (NWMS). This exercise involved examining a number of alternative waste management scenarios with the help of the GreenCape Sector Development Agency - a not-for-profit special purpose vehicle (SPV) for the Green Economy funded through of the Department of Economic Development and Tourism (DEDAT) of the Western Cape Government. The financial and environmental performance of business-as-usual and four alternative waste management scenarios were examined. These had combinations of the following features:

---

Increasing recycling rates.

Treating organics via anaerobic digestion.

Disposing of remaining waste at external landfill sites once Devon Valley has reached full capacity.

Achieving economies of scale and spreading of risk via investigation of regional collaboration.

The current annual cost of waste management ranges between R50-60 million, and is projected to increase as more stringent environmental legislation comes into effect and alternatives to the Devon Valley landfill site are required. Results of the analyses of the alternative waste management scenarios indicate that implementation of alternative waste treatment will most likely require large capital investment<sup>1</sup> and, making conservative assumptions with regard to the cost of capital, at least a 30-40% overall increase in the cost of waste management. In addition, the wide scope of projects and activities will require additional human capital within the solid waste department to ensure an effective implementation and a seamless transition from a predominantly landfill based approach to the alternative waste management approach required both in the short and the longer term.

The biggest risk identified for Stellenbosch relates to cost of inaction, heavy reliance on availability of external landfill sites for disposal of residual wastes, and affordability of large- scale treatment processes.

To address both the impending crisis and to make provision for sustainable waste management in future, five key focus areas have been identified for Stellenbosch for the next seven years:

1. Ensuring landfill availability
2. Localised waste solutions for Stellenbosch
3. Diversion of dry recyclables from landfill
4. Diversion of wet wastes (organics) from landfill
5. Regional collaboration for economies of scale

This IWMP therefore highlights the inevitable reliance on facilities outside of Stellenbosch and the urgent need to mitigate the risk of very costly future waste management services for Stellenbosch Municipality. The financial cost of inaction is substantial calling for immediate action as outlined in this document. However, the impending crisis is also an opportunity for Stellenbosch Municipality to lead by example in terms of effective Integrated Waste Management and demonstrable achievement of its Vision and all five of its stated goals. Turning the crisis into an opportunity depends on strong action against the plan outlined here.

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<sup>1</sup> A material recycling facility will require capital investment in the regions of R45 million and an anaerobic digester for organic waste will require capital investment of over R150 million.

**4. LEGAL COMMENT****Directorate: Strategic & Corporate Services**

The purpose of the report is to inform the Council of the proposed Third Generation Integrated Waste Management Plan to ensure efficient and cost effective service delivery by addressing the challenges of the current landfill sites and limited airspace available.

Section 11(3) of the Municipal Systems Act 32 of 2000 provides that a municipality exercises its executive and legislative authority by developing and adopting policies, plans, strategies, programmes, including setting target for delivery.

The proposed waste management plan is well informed and within the context of the statutory prescripts.

Therefore, content of the report and its recommendations are supported.

**RECOMMENDED**

- (a) that the attached 3<sup>rd</sup> Generation IWMP be supported by Council for approval in principle; and
- (b) that the proposed 3<sup>rd</sup> Generation IWMP be duly advertised for public comment until the end of February 2017, and be re-submitted together with any comments / objections by D:EA&DP and the public, for final approval and adoption by Council.

<b>Meeting:</b>	<i>4<sup>th</sup> Council: 2016-11-23</i>	<b>Submitted by Directorate:</b>	<i>Infrastructure</i>
<b>Ref No:</b>	<i>16/9/1/2</i>	<b>Author:</b>	<i>S Haider</i>
		<b>Referred from:</b>	<i>Mayco: 2016-11-16</i>



**7.6.4**

**THE THIRD GENERATION INTEGRATED  
WASTE MANAGEMENT PLAN**

**APPENDIX 1**

**TOWARDS A THIRD GENERATION INTEGRATED  
WASTE MANAGEMENT PLAN 2017-2022**

**June 2015**

**Stellenbosch Local Municipality**

## Executive summary

Stellenbosch Municipality is required to develop an Integrated Waste Management Plan (IWMP) for the period 2017-2022. This document is an interim planning document for 2015-2022, which has been developed to lay the foundation for Stellenbosch Municipality's 2017 – 2022 “third generation” Integrated Waste Management Plan (IWMP). The primary objective of an IWMP is to outline, integrate and optimise waste management plans within a municipality as required by the National Environment Management: Waste Act (NEM:WA, No 59 of 2008). The main goal of this “hybrid IWMP” document is to take stock of the current state of waste management in Stellenbosch Municipality and highlight current challenges, present plans for immediate interventions and present proposals for potentially viable alternative waste management solutions that require detailed investigation.

Stellenbosch Municipality faces an immediate challenge: the current landfill at Devon Valley has limited airspace available, with estimates indicating that in as early as three years' time it will be necessary to rely on disposal solutions outside of the municipal boundaries, i.e. facilities of other municipalities. The biggest risks identified for Stellenbosch relates to cost of inaction, and attendant heavy reliance on the availability of external landfill sites for disposal of residual wastes and affordability of large-scale treatment processes which might prove unaffordable for Stellenbosch.

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- A pilot project for production of compressed earth blocks (CEBs) from soil (clay) and builders' rubble at Devon Valley.
- Chipping of garden waste and transfer offsite for composting by a private contractor.

- A pilot separation-at-source programme for domestic waste, with the municipality providing clear bags and a collection service to residents in middle to high-income areas. The recyclables collected are then sent across the municipal boundary to the nearest integrated waste management facility - the City of Cape Town's Kraaifontein facility.

Although these initiatives are expected to lead to some diversion of waste from landfill, this does not constitute the significant diversion required. To this end, Stellenbosch sets out to identify plans and projects that could lead to more substantial diversion of waste from landfill and meet the recycling targets set by the National Waste Management Strategy (NWMS). This exercise involved examining a number of alternative waste management scenarios with the help of the GreenCape Sector Development Agency - a not-for-profit special purpose vehicle (SPV) for the Green Economy funded through of the Department of Economic Development and Tourism (DEDAT) of the Western Cape Government. The financial and environmental performance of business-as-usual and four alternative waste management scenarios were examined. These had combinations of the following features:

- Increasing recycling rates.
- Treating organics via anaerobic digestion.
- Disposing of remaining waste at external landfill sites once Devon Valley has reached full capacity.
- Achieving economies of scale and spreading of risk via investigation of regional collaboration.

The current annual cost of waste management ranges between R50-60 million, and is projected to increase as more stringent environmental legislation comes into effect and alternatives to the Devon Valley landfill site are required. Results of the analyses of the alternative waste management scenarios indicate that implementation of alternative waste treatment will most likely require large capital investment<sup>1</sup> and, making conservative assumptions with regard to the cost of capital, at least a 30-40% overall increase in the cost of waste management. In addition, the wide scope of projects and activities will require additional human capital within the solid waste department to ensure an effective implementation and a seamless transition from a predominantly landfill based approach to the alternative waste management approach required both in the short and the longer term.

The biggest risk identified for Stellenbosch relates to cost of inaction, heavy reliance on availability of external landfill sites for disposal of residual wastes, and affordability of large-scale treatment processes

To address both the impending crisis and to make provision for sustainable waste management in future, five key focus areas have been identified for Stellenbosch for the next seven years:

1. **Ensuring landfill availability:** Given the lead times for putting in place alternative treatment options, landfill will continue to be an important part of waste management. Identification and planning for an alternative landfill disposal location is required. Options that need to be investigated include:
  - a. Contracts with/collaboration between municipalities (e.g. City of Cape Town, Drakenstein).
  - b. District level facility<sup>2</sup> i.e. a landfill site built to serve more than one municipality within a district. Currently there are plans for a site in Worcester, but this may not

<sup>1</sup> A material recycling facility will require capital investment in the regions of R45 million and an anaerobic digester for organic waste will require capital investment of over R150 million.

<sup>2</sup> District municipalities are mandated to provide bulk services such as landfills for more than one local municipality, as per the Municipal Structures Act (No 117 of 1998) which make provision for a District Municipality to assist local municipalities in this respect (Republic of South Africa, 1998)

be financially attractive for Stellenbosch, as diversion to the proposed City of Cape Town Regional Facility could be more cost effective.

2. **Localised waste solutions for Stellenbosch:** Treatment of waste at source to minimise transport costs, and extend longevity of Devon Valley landfill, by:
  - a. Divert as much waste from Franschhoek at source via development of a drop-off site (for recyclables, construction and demolition waste and general waste) and chip garden waste at source.
  - b. Implement organic treatment within the informal settlements across the municipality in order to address both cleansing needs and to minimise transport costs and the amount of organics going to landfill.
  
3. **Diversion of dry recyclables from landfill:** - implementation of recycling, including:
  - a. Possible extension of separation at source programme.
  - b. Investigate use of drop-off sites where possible.
  - c. Complete a feasibility assessment of developing a local materials recovery facility, and implement the recommendations thereof.
  - d. Development and implementation of buy-back centres for recyclable materials.
  
4. **Diversion of wet wastes (organics) from landfill:**
  - a. Complete investigation into feasibility of waste-to-energy in Stellenbosch.
  - b. Complete the Section 78 (3) process for identification of delivery- and funding mechanisms for waste services. (This is required due to the expected high capital and operating costs of the initiatives required for alternative waste management, and technical capacity required pointing towards collaboration with the private sector e.g. leveraging private sector investment through potential public-private partnerships).
  
5. **Regional collaboration for economies of scale:** There is a strong argument for development of collaborative solutions to obtain economies of scale to make alternatives waste treatment financially viable. However, the key challenge is ensuring a coordinated approach from the different stakeholders from an early stage. This will allow all parties to provide input and work towards a common goal from the onset. It is therefore imperative to ensure the Section 78 (3), when conducted, explore the viability of collaboration with other municipalities in the region including the potential costs and risks for Stellenbosch.

This IWMP therefore highlights the inevitable reliance on facilities outside of Stellenbosch and the urgent need to mitigate the risk of very costly future waste management services for Stellenbosch Municipality. The financial cost of inaction is substantial calling for immediate action as outlined in this document. However, the impending crisis is also an opportunity for Stellenbosch Municipality to lead by example in terms of effective Integrated Waste Management and demonstrable achievement of its Vision and all five of its stated goals. Turning the crisis into an opportunity depends on strong action against the plan outlined here.

**Disclaimer**

This hybrid IWMP document is the sole property of Stellenbosch Municipality, and was drafted with assistance from GreenCape. GreenCape has taken great care and made every effort to confirm the accuracy of the information presented in this document, and as such guide Stellenbosch Municipality towards doing more targeted evaluation of viable options. However, no guarantee is given as to the completeness or accuracy of the contents, including but not limited to the model results for alternative waste treatment costing, and carbon footprint. The final projects selected for implementation will be solely at the discretion of Stellenbosch Municipality. Any enquiries regarding this IWMP shall be addressed directly to the Solid Waste Department of Stellenbosch Municipality.

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## List of Acronyms

CFLs: Compact fluorescent lamps

CoCT: City of Cape Town

CWDM: Cape Winelands District Municipality

DoLG: Department of Local Government

DEA: Department of Environmental Affairs

DEA&DP: Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)

DST: Decision Support Tool

EASETECH: Environmental Assessment System for Environmental TECHNOlogies

EMIs: Environmental Monitoring Inspectors

IDP: Integrated Development Plan

IndWMPs: Industrial Waste Management Plans

IWMP: Integrated Waste Management Plan

LCA: Life Cycle Analysis

MFMA: Municipal Finance Management Act

MSA: Municipal Systems Act

MSA: Municipal Structures Act

NEM:WA : National Environmental Management: Waste Act

NEMA : National Environmental Management Act

REDISA: Recycling and Development Initiative of South Africa

SAWIS: South African Waste Information System

WC024: - National area code for Stellenbosch Local Municipality

## 1. Introduction and Purpose

The purpose of an Integrated Waste Management Plan (IWMP) is to assimilate information and enable optimised waste management planning within a municipality as required by the National Environment Management: Waste Act (NEM:WA, No 59 of 2008). Section 11(1) of NEM:WA requires that local, district and provincial departments responsible for waste management prepare IWMPs. Furthermore, Section 11(4) states that a municipality must include the approved IWMP within its Integrated Development Plan (IDP).

This document is an interim planning document covering the 2015-2022 period, outlining immediate actions (for 2015 – 2017) required for solid waste management in Stellenbosch Municipality (WC024) and laying the foundation for Stellenbosch Municipality's third generation IWMP (2017-2022). The third generation IWMPs will cover the period spanning 2017-2022 in alignment with the timelines for Integrated Development Plans (IDPs) stipulated by the Department of Local Government's (DoLG).

The challenges in waste management faced by Stellenbosch Municipality and the limited scope in the second-generation IWMP implementation plan necessitated drafting an active planning document that outlines immediate actions for solid waste management in Stellenbosch, while considering the long-term view. This interim IWMP will be updated in 2017 and submitted for approval to the Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) as the official third generation IWMP.

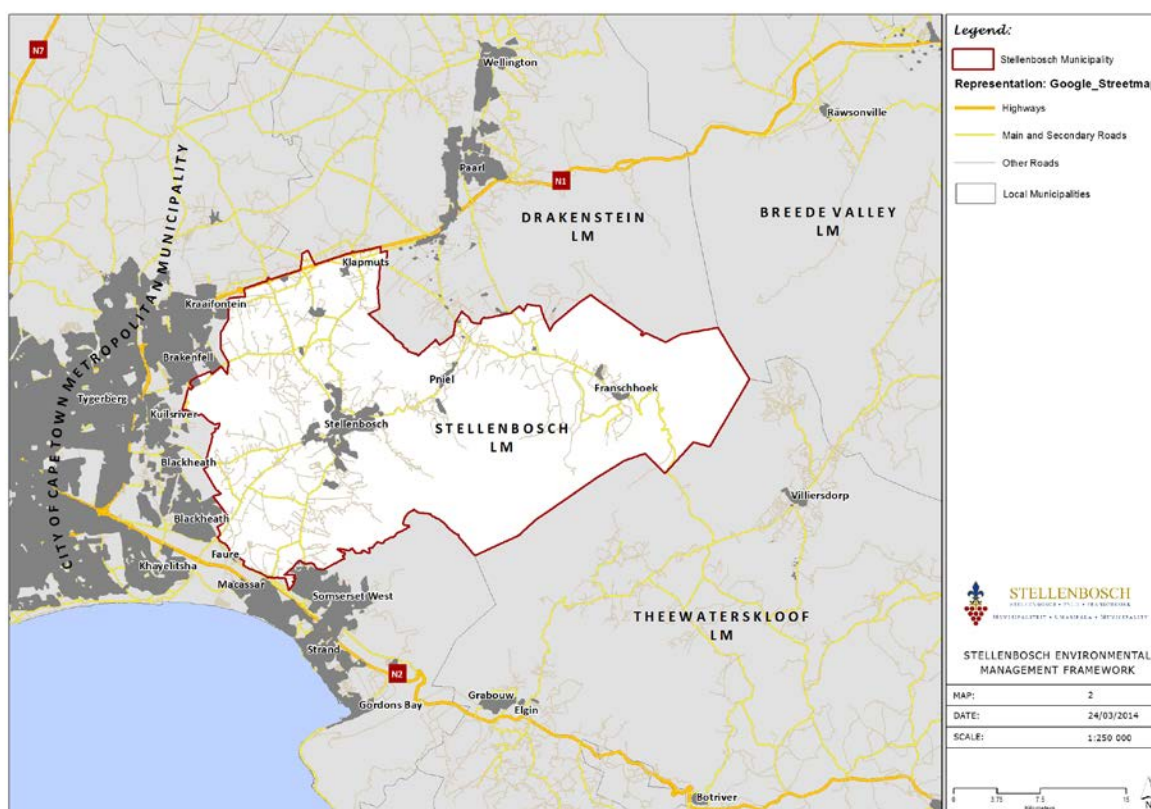
This hybridised IWMP therefore aims to:

- i) Present the status of waste management and challenges faced by the Stellenbosch Municipality.
- ii) Outline a clear plan for the **Stellenbosch Municipality to move away from a predominantly landfill based system towards alternative waste management practice.**
- iii) Link and integrate all the activities that make up the Stellenbosch waste management system (achieve Integrated Waste Management).
- iv) Inform and enable alignment between all the relevant stakeholders e.g. decision makers, the business sector and Stellenbosch community to enable achievement of Stellenbosch Municipality's waste management goals.
- v) Ultimately, propose ways of achieving Stellenbosch Municipality's waste management vision and goals over the next five years to establish long-term, sustainable waste management practices.

The rest of this IWMP presents the background (Section 2), vision, goals (Section 3) and the waste management challenges in Stellenbosch (Section 4). This is followed by an overview of the waste policy drivers (Section 5), the status of waste management in Stellenbosch (Section 6), projects planned in the immediate future (Section 7). The rest of the document presents an analysis of potential integrated waste management trajectories for Stellenbosch, implementation plan, key recommendations and conclusions on the way forward for Stellenbosch Municipality

## 2. Background

Stellenbosch Local Municipality (WC024) is one of five local municipalities that fall under the Cape Winelands District Municipality. Two Cape Winelands Municipalities - Drakenstein and Breede Valley - flank Stellenbosch Municipality (north and east respectively). Stellenbosch Municipality also shares municipal boundaries with Theewaterskloof to the south (Overberg District) and City of Cape Town (CoCT) Metropolitan Municipality to the west, as illustrated in Figure 1 below.



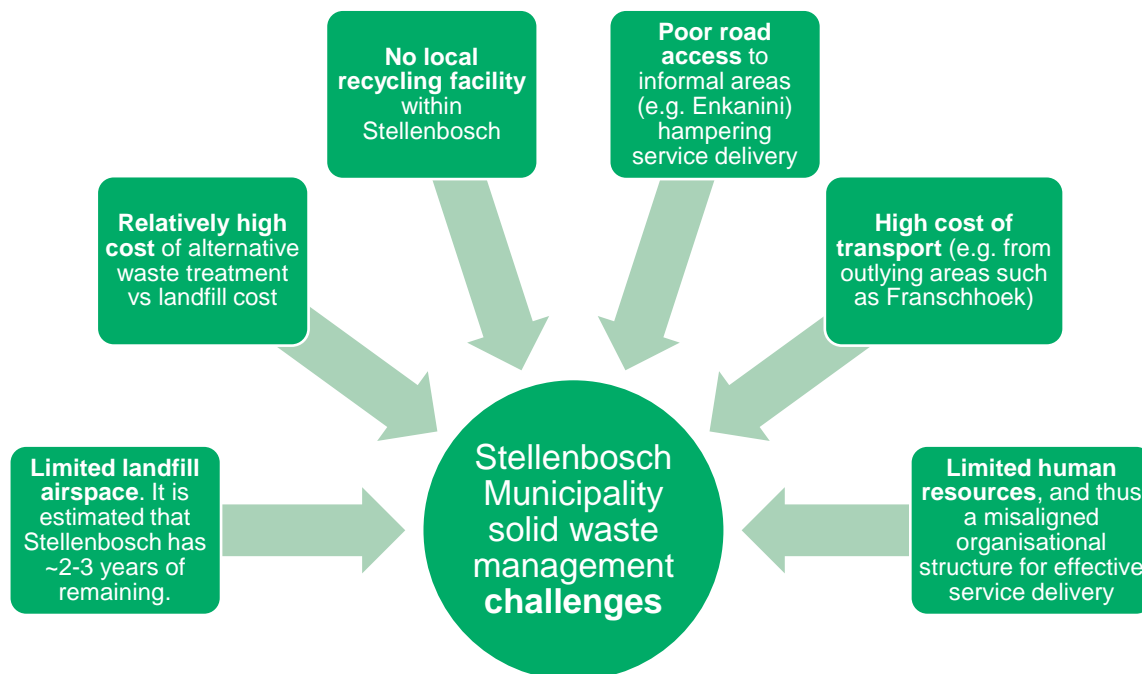
**FIGURE 1: MAP OF STELLENBOSCH MUNICIPALITY AND NEIGHBOURING MUNICIPALITIES (STELLENBOSCH MUNICIPALITY GIS DEPARTMENT, 2015)**

With an estimated population of 173,000 spread across a total area of 812km<sup>2</sup>, the municipality generates approximately 118,000 tonnes<sup>3</sup> of solid waste per annum, of which c.45,000 tonnes per annum is domestic waste.

The bulk of the population is clustered in close proximity to Stellenbosch town (ca.70%); with the remaining 30% of the population spread more widely. This presents a challenge concerning increasing the costs of service delivery to outlying areas, such as Franschhoek due to increased transportation costs. (This challenge is common to many municipalities across South Africa).

<sup>3</sup> This was based on extrapolation of January 2014 – June 2014 waste information. Updated recent information (which was not available at the time of development of this plan) indicates closer to 150,000 tonnes per annum

To move away from landfill as a predominant approach to waste management, Stellenbosch Municipality faces a number of challenges such as limited landfill airspace, high costs of service delivery to informal areas, limited budget for alternative treatment as landfilling remains a cheaper option, limited capacity within the solid department limited the scope of work required as shown in Figure 2.



**FIGURE 2: SOLID WASTE MANAGEMENT CHALLENGES AT A GLANCE**

The limited human resource capacity with the solid waste department is hindering effective division of tasks between strategic planning and operations despite the recent capacity increase within the solid waste department from one staff member (i.e. the Solid Waste Manager) to three staff members to handle management and planning.

There has been significant progress since the development of the first and second generation IWMPs in 2006 and 2011, respectively. Some of the more recent developments include:

- Installation and commissioning of a weighbridge in late 2013. This has led to a shift from unreliable waste generation estimates, to actual figures, enabling better planning. Additional In particular:
  - A comprehensive waste characterisation study (undertaken in 2012) that provides a better understanding in terms of waste quantities per waste category (e.g. recyclables, organics).
  - Fitting of lift loggers on all the compactor vehicles, which enables collation of waste service delivery data, such as the number of (bin and skip) lifts per area, weight of each lift, and itinerary of driver.<sup>4</sup>
- Compliance with landfilling requirements, including development of a fully engineered landfill cell in 2014.

Although Stellenbosch Municipality has implemented interventions to improve the management of waste, the municipality must still overcome the challenge of its **limited**

<sup>4</sup> The main challenge with lift loggers currently is consistency of use, and limited capacity within the Municipality for data collation and analysis.

**landfill airspace.** At the beginning of 2014, there was only 480,000 m<sup>3</sup> of airspace remaining at the Devon Valley landfill. It is estimated that this will be exhausted by 2017-2018. Therefore, waste diversion from landfill disposal and/or identification of alternative disposal strategies are critical.

### 3. Stellenbosch Municipality vision and goals

This IWMP addresses the challenges described in Section 2 and seeks to ensure Stellenbosch meets its own long-term vision and national goals set for waste management. This section outlines the vision for Stellenbosch, showing how the goals described in the vision link to solid waste management. Stellenbosch Municipality's waste management is weighed against the eight goals set in the National Waste Management Strategy (Department of Environmental Affairs, 2012). This sets the tone for the rest of this document, starting with a description of current and planned activities aimed at alignment with the eight goals in the NWMS.

#### 3.1 The vision for Stellenbosch Municipality

Stellenbosch Municipality has set five goals in support of its vision to be the “**Innovation Capital of South Africa**”. Table 1 lists these along with how each goal is linked to solid waste management.

**TABLE 1: ALIGNMENT OF SOLID WASTE MANAGEMENT GOALS WITH GOALS OF STELLENBOSCH MUNICIPALITY**

	<b>Stellenbosch goals</b>	<b>Link to solid waste management</b>
1	The <i>Preferred Investment Destination</i>	To service the waste management requirements associated with the envisioned increased investment and associated growth, Stellenbosch will enable and encourage investment in waste infrastructure such as anaerobic digestion (AD) and, material recycling facilities.
2	The <i>Greenest Municipality</i>	This goal will be achieved through diversion of waste from landfill through, for example, identifying environmentally sustainable solutions for the organic fraction of domestic waste.
3	The <i>Safest Valley</i>	This goal can be achieved through having a compliant landfill site with control measures to reduce health hazards due to poor waste management practices.
4	A municipality which promotes <i>Dignified Living</i>	Equitable provision of refuse removal services and area cleaning to all wards in the municipality.
5	<i>Good Governance and Compliance</i>	Ensuring facilities within the municipality are licensed and compliant; effective control of illegal dumping and development and implementation of effective waste by-laws

### 3.2 National goals

Table 2 presents a summary of the goals in the NWMS. The NWMS aims to achieve the objectives set out in NEM:WA (No. 59 of 2008) and is structured around a framework of eight goals with their respective targets, which must be met by 2016. Section 1 of this report (



Implementation plan and resources required) discusses more broadly how Stellenbosch Municipality aims to address these goals and target.

TABLE 2: SUMMARY OF NWMS GOALS (NWMS, 2011)

	Description	Targets (2016)	Stellenbosch status quo
<b>Goal 1:</b>	Promote waste minimisation, re-use, recycling and recovery of waste.	<ul style="list-style-type: none"> <li>• 25% of recyclables diverted from landfill sites for re-use, recycling or recovery.</li> <li>• All metropolitan municipalities, secondary cities and large towns have initiated separation-at-source programmes.</li> <li>• Achievement of waste reduction and recycling targets set in Industry Waste Management Plans (IndWMPs) for paper and packaging, pesticides, lighting (CFLs) and tyres industries.</li> </ul>	<ul style="list-style-type: none"> <li>• Stellenbosch is currently achieving a 2% diversion of domestic wastes, including recyclables (i.e. 900 tonnes per annum), with the private sector contributing at least an additional 2000 tonnes per annum from mixed sources (e.g. landfill pickers, commercial and industrial enterprises).</li> <li>• A separation-at-source programme has been piloted, but is not operating effectively as it is inconsistent due to indifferent work ethos from the workers and also very costly for the municipality.</li> <li>• No IndWMPs have been gazetted except for the tyre industry (REDISA plan) approved in 2013. Tyres are therefore no longer landfilled in Stellenbosch.</li> </ul>
<b>Goal 2:</b>	Ensure the effective and efficient delivery of waste services.	<ul style="list-style-type: none"> <li>• 95% of urban households and 75% of rural households have access to adequate levels of waste collection services</li> <li>• 80% of waste disposal sites have permits.</li> </ul>	<ul style="list-style-type: none"> <li>• 100% of urban households receive regular waste collection services in Stellenbosch. Currently, most smallholdings and farms manage their own waste disposal<sup>5</sup></li> <li>• The Devon Valley Landfill site and Klappmuts Transfer Station are licensed, and have the required permits.</li> </ul>
<b>Goal 3:</b>	Grow the contribution of the waste sector to the green economy.	<ul style="list-style-type: none"> <li>• 69 000 new jobs created in the waste sector</li> <li>• 2600 additional SMEs and cooperatives participating in waste service delivery and recycling</li> </ul>	<ul style="list-style-type: none"> <li>• This is a difficult number to track both nationally and in Stellenbosch as these jobs are shared between the public and private sector. The waste projects in the pipeline in Stellenbosch will create opportunities for private sector investment and job creation (see Section 7).</li> </ul>

<sup>5</sup> The new norms and standards for disposal (2014) have made this illegal, requiring action in the Stellenbosch IWMP.

Description	Targets (2016)	Stellenbosch status quo
<b>Goal 4:</b> Ensure that people are aware of the impact of waste on their health, well-being and the environment.	<ul style="list-style-type: none"> <li>80% of municipalities running local awareness campaigns.</li> <li>80% of schools implementing waste awareness programmes.</li> </ul>	<ul style="list-style-type: none"> <li>Stellenbosch and the Cape Winelands District Municipalities have existing awareness programmes.</li> <li>Publication of municipal waste initiatives has occurred in the Library publication and other newspapers such as Eikestadnuus.</li> <li>The solid waste department in Stellenbosch plans to increase its outward communication with the public based on budget available. Examples include: flyers outlining basics of responsible waste management and recycling; names and contacts of recyclers.</li> </ul>
<b>Goal 5:</b> Achieve integrated waste management planning.	<ul style="list-style-type: none"> <li>All municipalities have integrated their IWMPs with their IDPs, and have met the targets set in IWMPs.</li> <li>All waste management facilities required to report to the South African Waste Information System (SAWIS) have waste quantification systems that report information to WIS.</li> </ul>	<ul style="list-style-type: none"> <li>Stellenbosch already has drafted two IWMPs (2006 and 2010) and is in the process of working towards a third IWMP (this document)</li> <li>The Municipality has current data on waste disposed at the Devon Valley site, and volumes recycled via the CoCT's Kraaifontein Integrated Waste Management Facility (IWMPF).</li> </ul>
<b>Goal 6:</b> Ensure sound budgeting and financial management for waste services.	<ul style="list-style-type: none"> <li>All municipalities that provide waste services have conducted full-cost accounting for waste services and have implemented reflective tariffs.</li> </ul>	<ul style="list-style-type: none"> <li>Stellenbosch has made significant progress in this regard. A study was done by the Sustainability Institute to determine cost of landfilling to the municipality versus separation at source, including cost of transporting and collecting waste (de Wit, 2013). Notably, the study revealed that the current separation at source programme costs Stellenbosch R1900/ton versus R450/ton to landfill.</li> </ul>
<b>Goal 7:</b> Provide measures to remediate contaminated land.	<ul style="list-style-type: none"> <li>Assessment complete for 80% of sites reported to the contaminated land register.</li> <li>Remediation plans approved for 50% of confirmed contaminated sites.</li> </ul>	<ul style="list-style-type: none"> <li>SALIEM PLEASE ADD</li> </ul>

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Description	Targets (2016)	Stellenbosch status quo
<b>Goal 8:</b> Establish effective compliance with and enforcement of the Waste Act.	<ul style="list-style-type: none"><li>• 50% increase in the number of successful enforcement actions against non-compliant activities.</li><li>• 800 Environmental Management Inspectors (EMIs) appointed in the three spheres of government to enforce the Waste Act.</li></ul>	• SALIEM PLEASE ADD

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### 3.3 Solid waste management goals

The section presents an overview of the Stellenbosch Solid Waste Department strategic goals and priorities. These goals are focussed on waste minimisation, skills development within the department, improving the waste information system and general communication as well improving internal management within the municipality to align these with legal requirements (e.g. compliance with municipal processes, management of various contracts, costs and budgeting implications for Stellenbosch Municipality – see Figure 3 below).

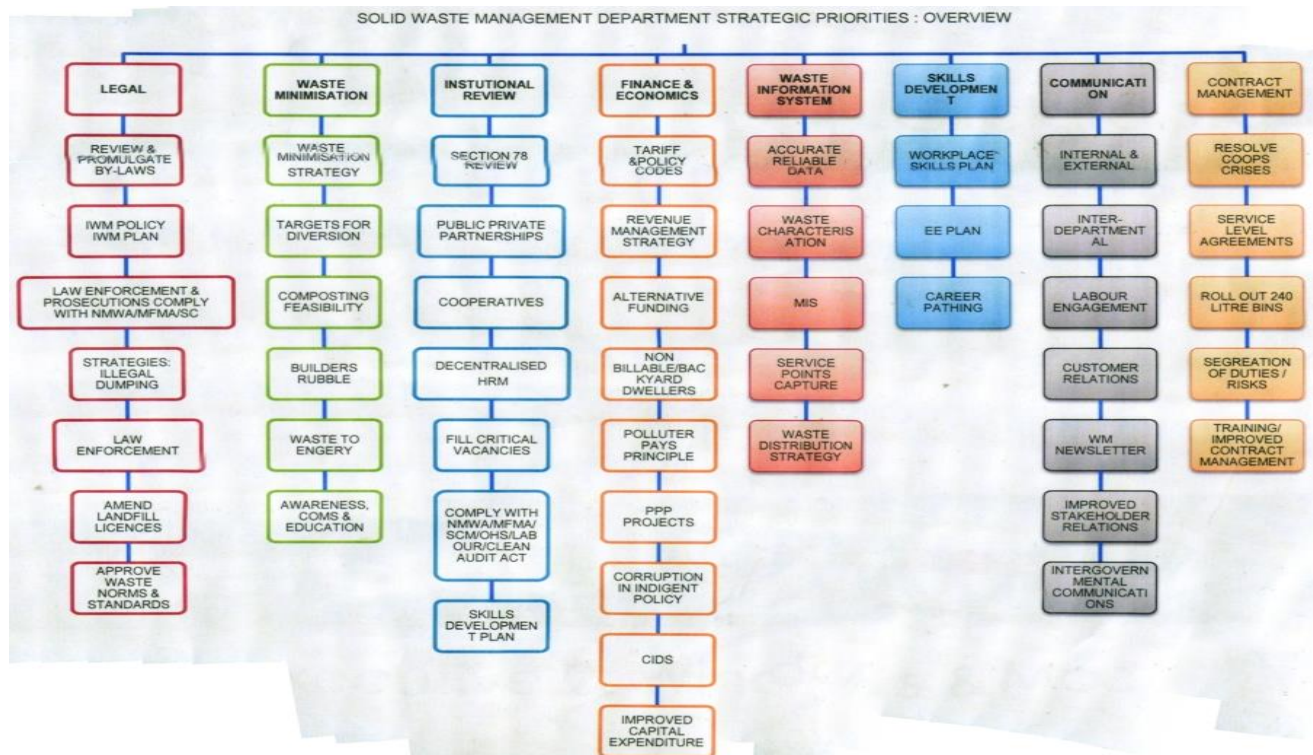


FIGURE 3: STRATEGIC PRIORITY AREAS FOR THE SOLID WASTE DEPARTMENT

Table 3 presents a detailed overview of these goals grouped into three categories:

- Short-term: 1-3 years
- Medium term: 3 to 5 years and
- Long-term: 5 to 10 years

**TABLE 3: FOCUS AREAS FOR STELLENBOSCH MUNICIPALITY WASTE MANAGEMENT**

Short term goals (2015-2017)	Medium term goals (2018-2020)	Long term goals (2020+)
<b>Goal 1: Promote recycling and recovery of waste</b>		
<p>Review separation at source programme, and investigate ways of expanding current programme cost effectively, or develop new programme.</p> <p>Depending on review (and feasibility study) of separation-at-source programme, aim for roll out of separation-at-source to 30 % of medium-high income households based on affordability</p>	<p>Roll out separation-at-source to 70 % of medium-high income households (pending assessment of affordability)</p>	<p>100% medium-high income households receiving separation-at-source (pending assessment of affordability).</p>
<p>Conduct a feasibility on establishment of buy-back centres for low-income households.</p> <p>Develop plans to establish buy-back centres where appropriate. Commence collaboration with Dilbeek (Twin City in Belgium) for provision of bicycles to allow for local collection and transport of recyclables.</p>	<p>Buy-back centres established where appropriate</p>	<p>Continual review of operation, with possible scope of incorporation into municipal recycling program</p>
<p>Chipping of garden waste, and transport offsite for composting. Develop a composting strategy to divert garden waste to landfill</p> <p>Establishment of a composting plant (can be achieved via a different mechanism e.g. contract with private sector as it is not a municipal core function)</p>	<p>Compost recycling plant fully operational and operated sustainably in Stellenbosch</p>	
<p>Investigate potential of collaborating with Stellenbosch Municipality Wastewater Treatment Department – possible use of four anaerobic digesters currently earmarked for</p>	<p>Investigation of alternatives for treatment of organic waste should it not be feasible to use the WWTW AD facilities or should</p>	<p>Substantial diversion of organics from landfill and conversion of this to valuable outputs such as energy.</p>

Short term goals (2015-2017)	Medium term goals (2018-2020)	Long term goals (2020+)
demolition for treatment (and potential energy generation) from organic wastes.	a large volume of organics require treatment.	
Establish pilot for diversion of clay and builders' rubble from landfill to produce compressed earth bricks (CEBs)	Opportunity for entrepreneur to run CEB operation in Stellenbosch	
Expand pilot/investigate additional opportunities for diversion of builders' rubble (including collaboration with Stellenbosch Municipality Roads and Transport Department and Human Settlements)	Adequate waste classification and separation at source of builders' rubble to enable uptake including other municipal departments as off-takers. (Expected to be primarily of tar, aggregate and crushed concrete).	Continued re-use of builders' rubble with possible expansion to other components.
Investigate Franschhoek drop-off site for recyclables, builders' rubble and garden waste and organic waste treatment (including food waste from restaurants)  Establish Franschhoek drop-off site by constructing facility	Roll out of Anaerobic Digestion (AD) facility for restaurant waste in Franschhoek	
Investigate feasibility for local materials recovery facility (MRF)  Develop and establish materials recovery facility (depending on outcome of feasibility study)	Construction complete and implemented (approximately 30t/day) (depending on outcome of feasibility study).	Continued review of operation, with possibility for expansion to accommodate growth.
Investigate feasibility of waste-to-energy facility at Klapmuts and develop plans to construct waste-to-energy facility	Finalise selection of viable waste-to-energy technology option, and financing mechanism for Stellenbosch (and/or the Cape Winelands District Municipality)	
Develop a strategy for treatment of organic waste in informal settlements  Establish and roll out organic waste treatment option(s) to 150 informal households (i.e.2% of informal households)	Increase the roll out of organic waste treatment services to 10% of informal households	Increase the roll out of organic waste treatment services to 25% of informal households

Short term goals (2015-2017)	Medium term goals (2018-2020)	Long term goals (2020+)
<b>Goal 2: Ensure the effective and efficient delivery of waste services</b>		
Develop a strategy for the collection of waste services for peri-urban and rural households – mostly farms Establish and rollout collection service for 50% of peri-urban and rural households	Increase the roll out of waste collection services to 75% of peri-urban and rural households	Increase the roll out of waste collection services to 100% of peri-urban and rural households
Conduct Municipal Systems Act Section 78(3) investigation for service delivery mechanisms	Implement service delivery mechanism(s) for short-medium term	Implement service delivery mechanism(s) for long term
<b>Goal 3: Ensure that legislative tools are developed to deliver on the Waste Act and other applicable legislation</b>		
Develop waste by-law to regulate all aspects of waste management and provide an effective legal and administrative framework for Stellenbosch Municipality to manage and regulate waste management activities.	Implementation and enforcement of by-law	Review and update by-law
<b>Goal 4: Sound budgeting and financing of waste management services</b>		
Conduct full cost accounting for waste services Review and implement tariffs for waste collection and disposal	Update full cost accounting for waste services Review tariffs for waste management	Update full cost accounting for waste services Review tariffs for waste management
Allocate budget for waste services from equitable share funding (i.e. for financing of free basic services)	Allocate budget for waste services from equitable share funding	Allocate budget for waste services from equitable share funding
<b>Goal 5: Ensure the safe and proper disposal of waste</b>		
Complete plans for rehabilitation and capping of Devon Valley landfill site Capping of cells 1 and 2 of Devon Valley, including cutting and reshaping of old cells (1 and 2)	Capping of cell 3, and rehabilitation of entire Devon Valley Landfill	Monitoring of closed landfill
Obtain authorisation for landfill gas waste-to-energy <sup>6</sup>	Investigate funding options to implement landfill gas project in Stellenbosch	

<sup>6</sup> A feasibility study on landfill gas to energy conducted at the Devon Valley site showed a potential of 2MW, over a period of 10 years.



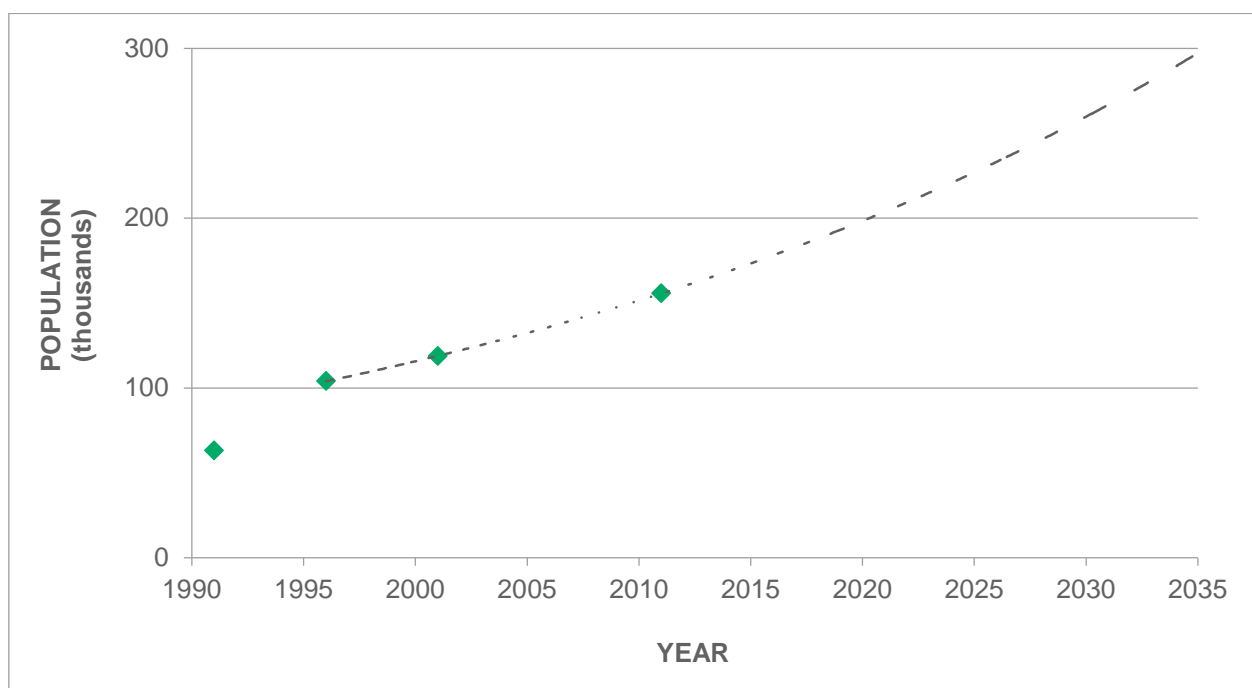
Short term goals (2015-2017)	Medium term goals (2018-2020)	Long term goals (2020+)
<p>Determine the available waste disposal airspace and develop a strategy for future waste disposal, including discussions with neighbouring municipalities (possible use of CoCT's Bellville landfill site, or alternatively transport of waste to CoCT's Kraaifontein IWMF) for transfer to Vissershok landfill).</p> <p>Start diverting part of the waste to a different municipality (in order to stagger the anticipated increase in cost to the municipality post closure of Devon Valley and allow for time for alternative waste management initiatives to be developed and implemented)</p>	<p>Continued discussion and investigation of joint disposal solutions with neighbouring municipalities depending on affordability</p>	<p>Development of shared facilities across municipalities</p>
<b>Goal 6: Education and awareness</b>		
<p>Develop an education and awareness strategy and training materials to roll out education and awareness campaigns</p> <p>Education and awareness campaigns implemented effectively (e.g. using an experienced service provider)</p>	<p>Update and improve education and awareness strategy and training materials to roll out education and awareness campaigns</p>	<p>Update and improve education and awareness strategy and training materials to roll out education and awareness campaigns</p>
<p>Develop competition programme to encourage educational institutions' involvement on waste management issues e.g. recycling; develop this for different levels, i.e. primary, secondary and tertiary institutions.</p> <p>For example, roll out the competition and work closely with the schools to ensure maximum participation</p>		
<b>Goal 7: Compliance and enforcement</b>		
<p>Determine the required number of Environmental Management Inspectors (EMIs) for the municipality to enforce by-laws and other waste transgressions.</p> <p>Appoint staff to enforce by-laws</p> <p>Enforce by-laws</p>	<p>Maintain required staff complement to enforce by-laws</p>	<p>Maintain required staff complement to enforce by-laws</p>
<p>Develop a system for residents to report waste transgressions</p>	<p>Maintain system for residents to report waste transgressions</p>	<p>Maintain system for residents to report waste transgressions</p>

## 4. Key challenges

While Stellenbosch has clearly articulated long, medium and short-term plans, the municipality faces a number of waste management challenges. This section therefore presents a detailed overview of waste management challenges in Stellenbosch. ....

The biggest challenge is the rapidly diminishing landfill airspace at the only landfill (Devon Valley), serving the entire Stellenbosch Municipal region. With less than three years of landfill airspace remaining, urgent measures are needed to divert solid waste from landfill disposal and extend the life of the landfill.

The current total population for the Stellenbosch Municipality is approximately 173,000, based on a population of 155,733 in 2011 and an annual growth rate of 2.71% (Statistics South Africa, 2011). Figure 4 shows the census results for the population for 1991, 1996, 2001 and 2011. The expected population growth rate in future has been estimated by excluding the 1991 data point (which precedes a perceptible influx of people into Stellenbosch Municipality), and fitting an exponential graph to the rest of the data. It can be seen that the population in Stellenbosch is set to grow from 173,000 in 2015 to 198,000 in 2020, and 296,000 in 2035.



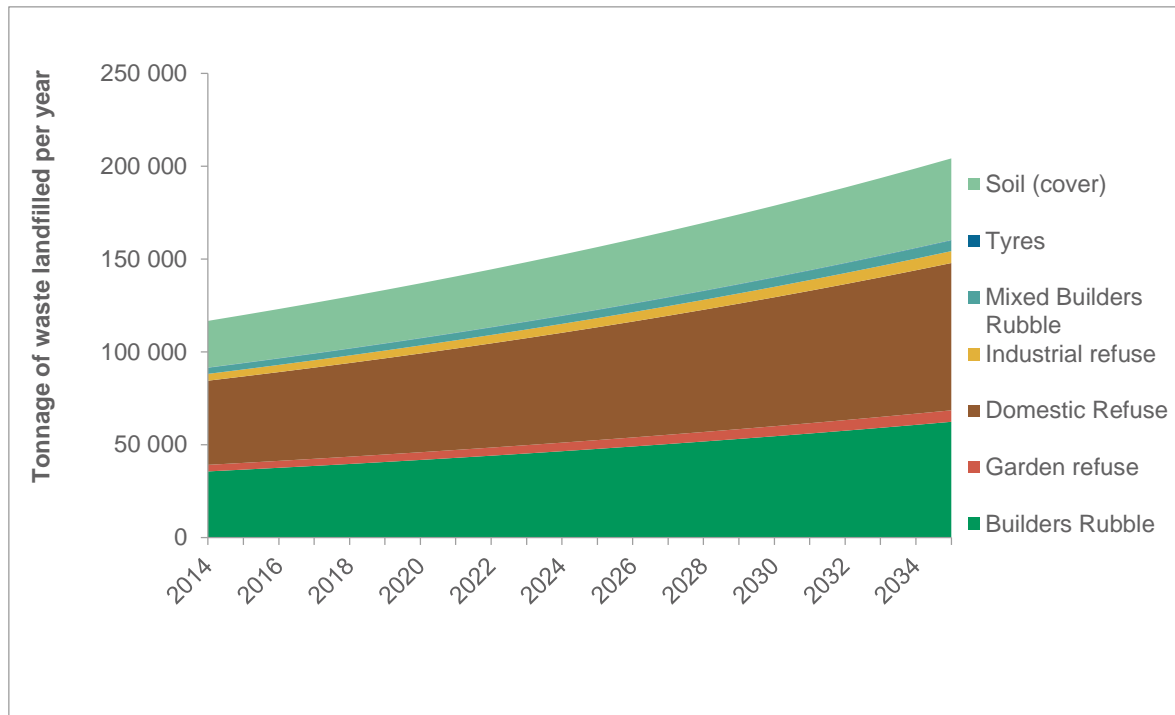
**FIGURE 4: STELLENBOSCH MUNICIPALITY PROJECTED POPULATION (FROM NATIONAL CENSUS DATA - 1991, 1996, 2001 AND 2011 CENSUSES)**

Population growth is usually accompanied by increasing waste volumes. Figure 5 shows the projected amount of solid waste generated over the next 20 years with the underlying assumption that the total waste generated over the period is directly proportional to population<sup>7</sup>. With the population increasing from 173,000 in 2011 to almost 300,000 in 2035, the total solid waste is expected to grow from approximately 118,000 tonnes per annum to almost 200,000 tonnes per

<sup>7</sup> These numbers however do not account for socio-economic changes, i.e. the waste generation per person per day has been assumed not to change with, for example, expected change in GDP per capita, or economic upturns or downturns, which impacts on waste generation.

annum. More specifically, the domestic waste portion is expected to grow from about 40,000 tonnes per annum to almost 70,000 tonnes per annum (Figure 6).

Figure 5 shows that the biggest fraction of solid waste being disposed of at the Devon Valley landfill sites, are soil cover, builders' rubble and domestic refuse. With only 480,000m<sup>3</sup> of airspace left at the beginning of 2014, this emphasises even further the need for Stellenbosch to divert these large portions of the waste and create an alternative disposal strategy as an immediate and high priority.

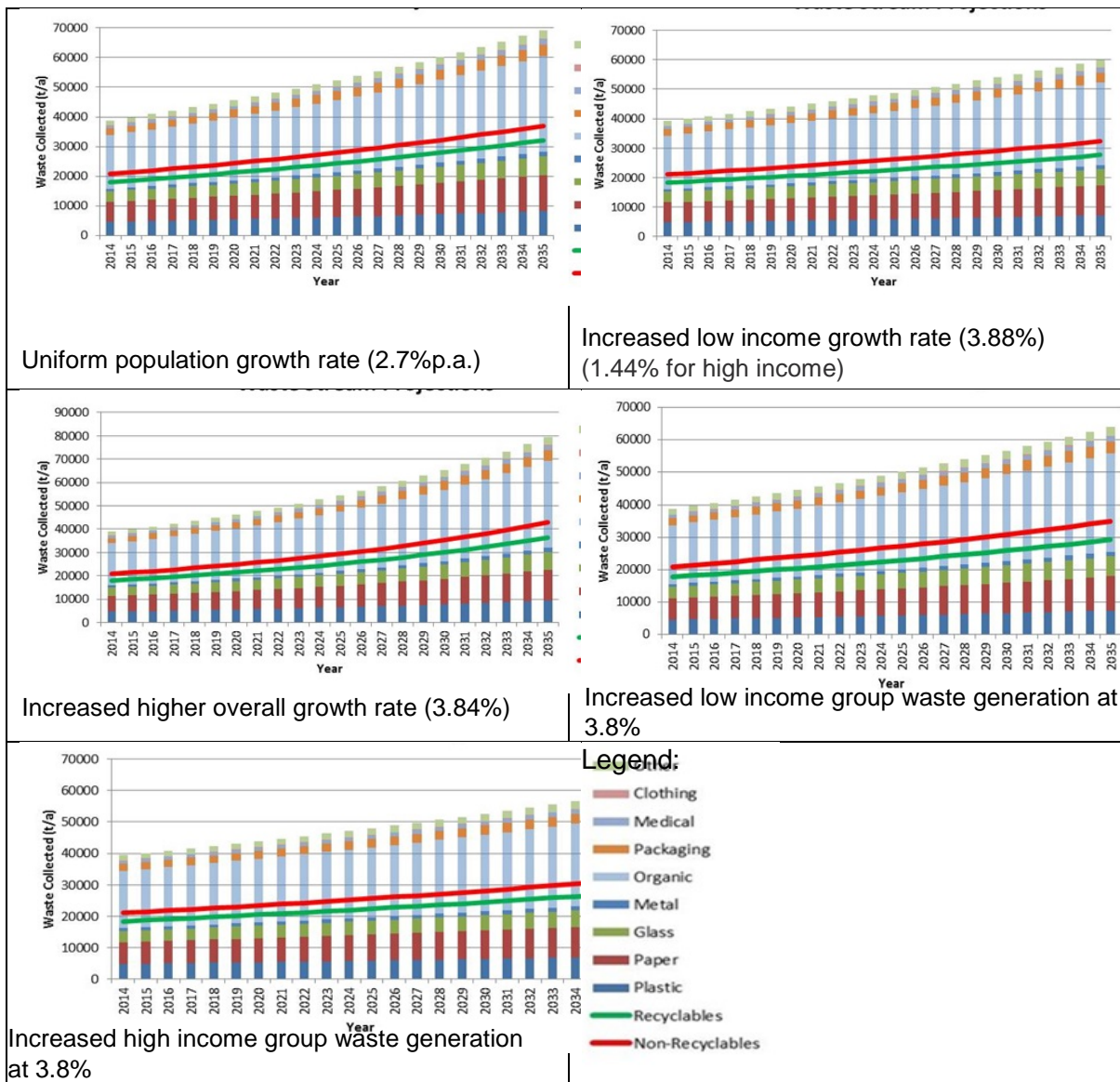


**FIGURE 5: TONNAGE OF WASTE LANDFILLED IN THE STELLENBOSCH MUNICIPALITY (TON/YEAR)**

Recall that the waste data shown in Figure 5 assume a population growth rate of 2.7%, and a uniform waste generation per capita across different income groups. Figure 6 presents the results of a sensitivity analysis conducted in a study to highlight the effects of changing both growth rates and waste generation rates (Bassier, 2015). The specific variables investigated included:

- assuming a uniform population growth rate across the municipality (2.7%) for both low and high income groups, with low and high income waste generation rates estimated at 0.3 and 1.2 kg per person per day respectively,
- achieving a 2.7% growth rate across the municipality but by assuming different growth rates between the high income and lower income groups (1.44% and 3.88% respectively),
- assuming a uniform population growth rate across the municipality (2.7%) for both low and high income groups, but allowing for an increased low income waste generation rate per capita (from 0.3 kg to 0.95 kg per person per day) as a result of influences such as a possible shift in income levels, more employment opportunities, etc;
- assuming a higher than StatsSA-predicted population growth for both low and high income groups (3.84%) as a result of influences such as migration, decreased mortality rates and increased life expectancy etc..

Based on the sensitivity analysis, the municipality needs to make provision for up to 80,000 tonnes of domestic waste per annum by 2035. In addition, it can be seen that the portion of organics is significantly high, which highlights the need to not only provide a solution for recyclables but also for organic wastes.



**FIGURE 6: PROJECTED WASTE GENERATION RATES FOR STELLENBOSCH MUNICIPALITY (BASSIER, 2015)**

A summary of the main challenges for solid waste management in Stellenbosch is presented in Figure 7. The municipality therefore needs:

- to implement short term (or quick implementation) measures to extend the life of the landfill (to address and avert the immediate crisis), while
- planning for both alternative waste management ,and
- alternative disposal options as the Devon Valley landfill site approaches the end of its useful life (to ensure sustainable waste management in future).



**FIGURE 7: PRIORITY AREAS FOR SOLID WASTE MANAGEMENT IN STELLENBOSCH MUNICIPALITY**

It is evident from the above that urgent action is required to identify viable waste options that will address the limited remaining landfill airspace in the short term. The next section presents an overview of the policy and regulatory landscape concerning solid waste management in South Africa and applicability in the Stellenbosch context.

## 5. Policy and regulatory drivers

This section presents an overview of the legislation governing solid waste management in South Africa, and an overview of applicable legislation with regards to Stellenbosch Municipality's plans.

### 5.1 Core legislation governing waste management

Section 24 of the **South African Constitution (Act No 108 of 1996)** states that everyone has a right to an environment which is not harmful to their health or well-being and the environment must be protected for present and future generations. With regards to the protection of the environment, Section 24 of Chapter 2 states that:

*Everyone has a right –*

- (a) to an environment that is not harmful to their health or well-being; and*
- (b) to have the environment protected for the benefit of the present and future generations, through reasonable legislative and other measures that –*
  - (i) prevent pollution and ecological degradation;*
  - (ii) promote conservation; and*
  - (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*

The role of local municipalities such as Stellenbosch Municipality is discussed in Schedule 5B of the Constitution, which stipulates that local municipalities must provide communities with basic services such as refuse removal, sewage services, electricity and water services. The objects of local government are stated in Section 152.

- (1) The objects of local government are –*
  - (b) to ensure the provision of services to communities in a sustainable manner;*
  - (d) to promote a safe and healthy environment*
- (2) A municipality must strive, within its financial and administrative capacity, to achieve that which is set out in subsection (1).*

Furthermore, Chapter 7 of the Constitution addresses local government matters and Section 151 states that:

- (3) A municipality has the right to govern, on its own initiative, the local government affairs of its community, subject to national and provincial legislation, as provided for in the Constitution.*

The powers and functions of municipalities are described in Section 156 of the Constitution, which state that:

- (1) A municipality has executive authority in respect of, and has the right to administer –*
  - (a) the local government matters listed in Part B of Schedule 4 and 5; and*
  - (b) any other matter assigned to it by national or provincial legislation.*

- (2) *A municipality may make and administer by-laws for the effective administration of the matters which it has the right to administer.*
- (3) *Subject to section 151(4), a by-law that conflicts with national or provincial legislation is invalid.*
- (5) *A municipality has the right to exercise any power concerning a matter reasonably necessary for, or incidental to, the effective performance of its functions.*

The **National Environmental Management Waste Act No 59 of 2008** provides the framework for integrated waste management within South Africa and gives legal effect to the waste management hierarchy. NEM:WA defines "Waste" as:

*any substance, whether or not that substance can be reduced, re-used, recycled and recovered-*

- (a) *that is surplus, unwanted, rejected, discarded, abandoned or disposed of;*
- (b) *which the generator has no further use of for the purposed of production;*
- (c) *that must be treated or disposed of; or*
- (d) *that is identified as a waste by the Minister by notice in the Gazette, and includes waste generated by the mining, medical or any other sector, -*
  - (i) *a by-product is not considered waste; and*
  - (ii) *any portion of waste, once re-used, recycled and recovered, ceases to be waste.*

The objectives of NEM:WA, are amongst others

- (a) *to protect health, well-being and the environment by providing reasonable measures for –*
  - (ii) *avoiding and minimising the generation of waste;*
  - (iii) *reducing, re-using, recycling and recovering waste;*
  - (iv) *treating and safely disposing of waste as a last resort;*
  - (v) *preventing pollution and ecological degradation;*
  - (vii) *promoting and ensuring the effective delivery of waste services.*

Section 12 of NEM:WA specifies the content of an Integrated Waste Management Plan (IWMP) and the procedural process that should be followed. Section 13 requires annual performance reports on the implementation of IWMPs to be submitted to the Member of the Executive Council (MEC) and the Minister for approval. Furthermore, NEM:WA requires that a consultation process must be followed in order to approve an IWMP. The NWMS gives effect to NEM:WA as discussed in Section 3 of this report.

## 5.2 Recent developments in waste management legislation

This section presents the amendments to the NEM:WA (No. 59 of 2008), by the National Department of Environmental Affairs (DEA), which are acting as drivers and have implications in waste management for Stellenbosch Municipality.

**TABLE 4: RECENT LEGISLATIVE CHANGES IN WASTE MANAGEMENT IN SOUTH AFRICA**

Amendments	Explanation	Implications for Stellenbosch
<b>The National Environmental Management: Waste Amendment Act, Act 26 of 2014</b>	<p>The definitions of waste have been updated to exclude all waste once recovered, reused or recycled.</p> <p>Recovery has been distanced from the manufacture of a product and is simply understood as the act of extracting material or another substance (including energy) from waste. This suggests that certain projects involving recovery and/or reuse would no longer require a waste licence as they are no longer recognised as waste.</p> <p>The amendment act now includes a definite end-of-waste status. Schedule 3 – dedicated to listing groups of defined waste – has also been added</p>	<p>This would impact the recycling industry operating in Stellenbosch Municipality i.e. this creates opportunities for the recycling of more material (both in terms of volume and kind). However, there are still some ambiguities in these regulations hence this potential expansion of the industry may not be realised rapidly.</p> <p>Having an “end of waste” status will increase opportunities for recycling and the beneficial use of waste. As indicated above, there is still some ambiguities in these regulations hence this potential expansion of the industry may not be realised rapidly.</p>
<b>R635 National Norms and Standards for Assessment of Waste for Landfill Disposal</b>	<p>This section specifies the analyses required for assessing wastes that can be disposed via landfill, and now includes total concentration and total leachable concentration.</p>	<p>The costs of waste assessment are now much higher for the industry. This may have the positive impact of incentivising landfill diversion or unintended consequences such as an increase in illegal dumping.</p>
<b>R636 National Norms and Standards for Disposal of Waste to Landfill</b>	<p>The classification of landfills has now changed, with stricter requirements for landfill containment barriers. The prohibition of certain wastes to landfill has now also been introduced within specified timescales.</p>	<p>The costs of developing a new landfill site will increase substantially to afford the barriers stipulated in the regulations (R636). This may make opportunities other than landfill disposal</p>



Amendments	Explanation	Implications for Stellenbosch
		(e.g. recycling/beneficial use) more (financially) attractive for waste generators.
<b>R634 Waste Classification and Management Regulations</b>	<p>The R634 regulations promote the treatment of hazardous wastes before disposal, as co-disposal and dilution of hazardous wastes before disposal will no longer be allowed.</p> <p>These regulations allow for the submission of a motivation to the Minister to exempt specific waste management activities from requiring waste licences.</p>	The second of these may enable beneficial use of waste should the necessary application be made and approved. It is expected that this will be done by parties such as industry associations rather than individuals/businesses.
<b>Creation of a National Waste Management Bureau (NWMB)</b>	<p>'The objectives of the NWMB will be to (i) enable waste minimisation, reuse, recovery and recycling of waste materials; (ii) monitor and disburse revenue collected through economic instruments, (iii) implement, monitor and evaluate the effects of Industry WMPs; (iv) build capacity in the NWMB to be able to provide support for municipal waste management plan development and implementation, and (v) municipal capacity building programmes.' (Department of Environmental Affairs, 2014)</p>	The plans of the NWMB might impact on the administrative duties of Stellenbosch Municipality (depending on reporting requirements for example), and/or provide additional capacity to Stellenbosch depending on the resources leveraged at national level.

## 5.3 Municipal processes

This section presents an overview of the two main acts governing municipal processes, which will be applicable to solid waste management in Stellenbosch. These are: the Municipal Systems Act (MSA, No 32 of 2000) the Municipal Finance Management Act (MFMA, No 56 of 2003). Detailed information on these and other acts and regulations applicable to waste management has been made available online<sup>8</sup>.

**TABLE 5: LIST OF RELEVANT MUNICIPAL LEGISLATION**

Relevant legislations and sections	Explanation	Implications for Stellenbosch
Municipal Systems Act No 32 of 2000. Sections 73, 76, 77, 78 (1-4), 79, 80, 81 and 83.	<p>Service delivery-Municipalities may provide services in-house (using the existing capacity within the municipality) or through external mechanisms by entering into service delivery agreements (internal contract, no tender required) with other municipalities.</p> <p>Municipalities must review and decide on the best method to provide services when reviewing IDPs, when new services need to be provided or current services need significant upgrades.</p> <p>Section 78 process is compulsory for determining Stellenbosch Municipality's ability to change or upgrade the provision of municipal services within the municipality or if the service can be outsourced to a service provider.</p> <p>If a municipality decides to make use of internal mechanisms for the provision of services, it must allocate sufficient and appropriate resources in order to ensure proper provision of the services.</p> <p>If a municipality provides a service with a service delivery agreement with another municipality, the municipality is responsible for regulating, monitoring and assessing services provided within a tariff policy (determined by the municipality), and to exercise its authority in</p>	<p>Stellenbosch Municipality has already completed Section 78 (1-2), which showed that alternative waste treatment would most likely be done externally. The solid waste department then secured Council approval to go ahead with the detailed assessment in Section 78 (3).</p> <p>Consideration of alternative waste treatment options for large-scale diversion will be explored in more details in Section 78 (3) investigation, which will determine (i) risk to the municipality, (ii) service delivery mechanism and (iii) affordability for Stellenbosch Municipality. A request for proposal was issued last year (2014) to appoint a service provider. The successful candidate bid was awarded and the process started in July 2015 (and is expected to be complete in November 2015)</p>

<sup>8</sup> Wastetreatmentguide (2015), [www.wastetreatmentguide.co.za](http://www.wastetreatmentguide.co.za)

Relevant legislations and sections	Explanation	Implications for Stellenbosch
	<p>order to ensure uninterrupted delivery in the best interest of the community.</p> <p>When the service is to be provided by a party that is not another municipality, a competitive bidding process for the selection of a preferred service provider must be conducted, which must ensure that all prospective service providers have equal and simultaneous access to relevant information and fraud and corruption must be minimised. The selection process must be fair, equitable, transparent and cost effective.</p>	
Municipal Finance Management Act No 56 of 2003	<p>This Act regulates all municipalities and all municipal entities. It was enacted to secure sound and sustainable management of the financial affairs of municipalities and other institutions in the local sphere of government; to establish treasury norms and standards for the local sphere of government; and to provide for matters connected therewith.</p> <p>The MFMA also defines how a municipality's supply chain process works for the procurement of municipal goods or services through tender process.</p> <p>It is required that all municipalities must have a supply-chain management policy to give effect to the procurement of municipal goods and services.</p> <p>The MFMA requires a municipality to investigate the implications of selecting a Municipal Entity (ME), one of the external service delivery mechanisms a municipality may consider. Section 84 of the MFMA prescribes how the impact of a possible ME should be assessed and provides for wide ranging stakeholder consultation. An ME may take the form of a private company established by one or more municipalities or in which one or more municipalities has acquired or holds an interest; a service utility established by a single municipality;</p>	The MFMA will be triggered if a PPP is selected as the preferred service delivery mechanism for the large-scale alternative waste treatment selected for Stellenbosch, and if the contractual agreement with the private party extends beyond the normal 3-5 years.

Relevant legislations and sections	Explanation	Implications for Stellenbosch
Municipal Finance Management Act No 56 of 2003 (cntd)	<p>or a multi-jurisdictional service utility established by two or more municipalities (refer Section 86 of the MFMA</p> <p>Section 33 of the MFMA presents the set of conditions under which municipalities commit to contracts longer than a period of three financial years that will have long term budgetary implications.</p> <p>If a municipality is approached with an unsolicited bid, a municipality is not forced to accept or reject it. If an unsolicited bid is accepted, additional guidelines set out by National Treasury are to be adhered to. An unsolicited bid may be accepted in instances in which there has been compliance with the prescribed framework. The prescribed framework regulates the power of municipalities and municipal entities to approve unsolicited bids received outside their normal tendering or other bidding processes. However, it is less cumbersome by testing the market and advertising a tender for all to bid.</p> <p>Municipalities may only enter into a Private Public Partnership (PPP) if they can prove that the agreement is beneficial to the municipality in the sense that it provides value for money, is affordable and it transfers appropriate technical, operational and financial risk to the PPP. Before a PPP is entered into, a municipality must first conduct a feasibility study.</p>	

## 5.4 Additional potential applicable legislation

Figure 8 presents an overview of additional legislations and regulations applicable to waste management and service delivery more broadly in South African Municipalities such as the Division of Revenue Act (No 5 of 2004), as well as the period during which these were developed (Keith & Associates, 2014).

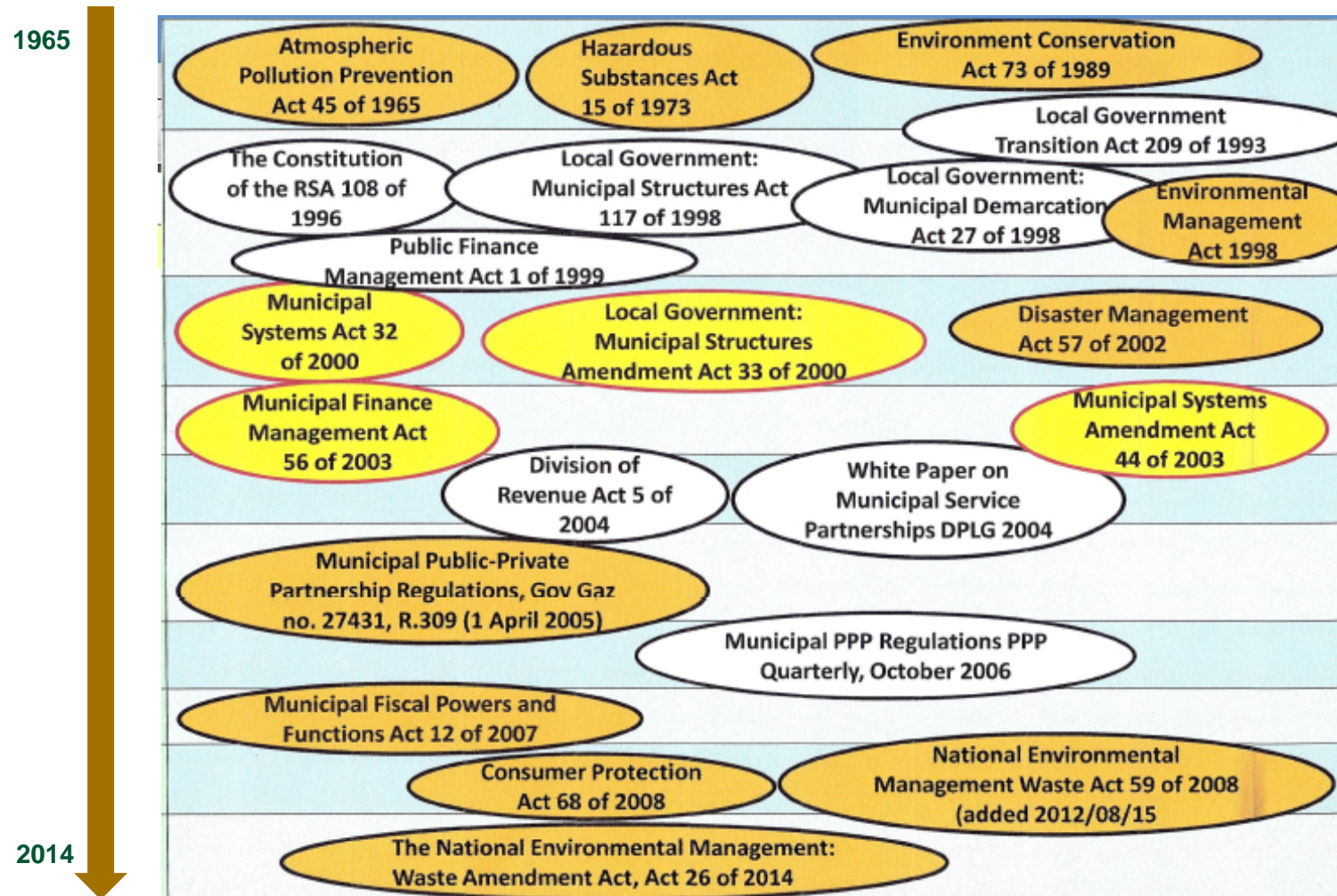


FIGURE 8: LEGAL FRAMEWORK FOR SERVICE DELIVERY AND WASTE MANAGEMENT IN SOUTH AFRICA

## 6. Current status

### 6.1. Waste generation statistics

Stellenbosch Municipality is currently generating approximately 118,000 tonnes of waste per annum based on projecting the January – June 2014 volumes. This increases to 150,000 tonnes per year if the estimate is based on the volume of waste generated from January 2014 – June 2015).

Due to the availability of data at the time of writing<sup>9</sup>, the analysis presented in the rest of this document are based on the January 2014 – June 2014 volumes. On a total mass basis, this is 21% lower than the projection over the full January 2014 – June 2015 tonnages. The significant difference is due to much higher builders' rubble and soil projections over the full period. Waste volumes and associated conclusions with regard to landfill airspace requirements may thus be underestimated and this should be taken into account when viewing the analysis and considering the implications of this analysis.

The full breakdown of waste generation in Stellenbosch is shown in Table 6, which indicates that, on a mass basis, approximately 99% of the waste generated is landfilled.

**TABLE 6: STELLENBOSCH MUNICIPALITY WASTE GENERATED<sup>10</sup>**

Waste classification	Quantity (tonnes per annum)		Volume (m <sup>3</sup> /annum)	
	Jan '14 – Jun '14 data	Jan '14 – Jun '15 data	Jan '14 – Jun '14 data	Jan '14 – Jun '15 data
Domestic waste landfilled	45,300	41,700	76,400	69,700
Builders' rubble	35,600	55,400	47,500	73,900
Soil	25,200	42,400	33,600	56,500
Commercial and industrial waste	3,670	4,165	6,190	7,020
Garden waste	3,530	3,470	17,700	17,400
Mixed rubble	3,220	1,570	4,300	2,100
Recyclables recovered (municipal) <sup>11</sup>	775	713	1,310	1,210
Recyclables recovered (private) <sup>12</sup>	243	223	410	376
Tyres	150	138	308	283
<b>Total waste generated</b>	<b>118,000</b>	<b>149,800</b>	<b>188,000</b>	<b>228,000</b>

<sup>9</sup> The figures for January 2014 – June 2015 were received from the service provider after the draft IWMP was compiled.. Additional work will be done post-submission of this draft, and will be included in an updated version of this document.

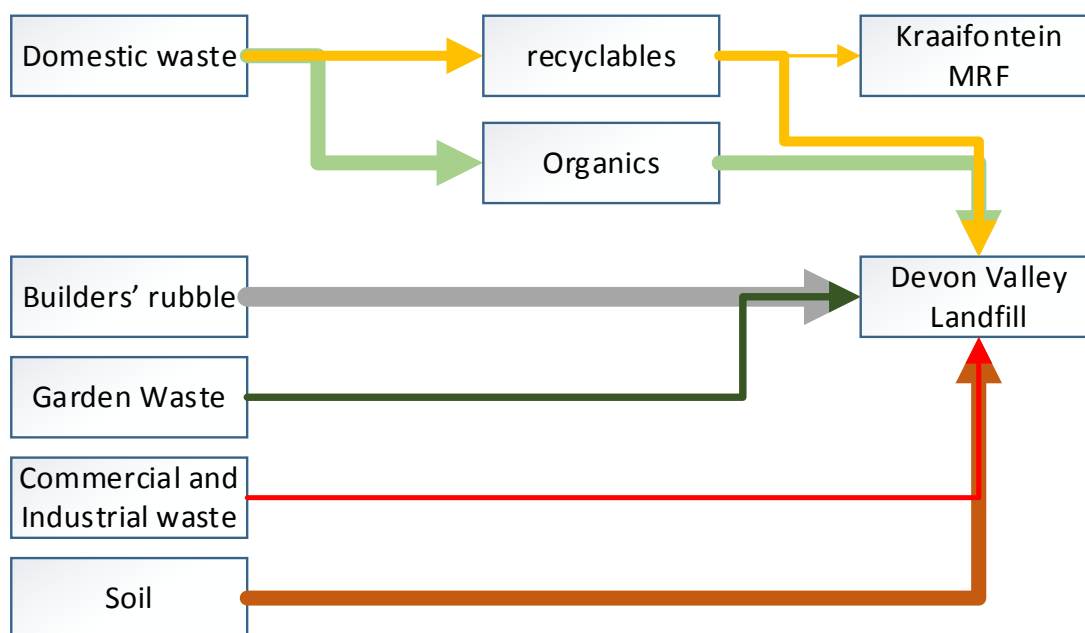
<sup>10</sup> Estimates made for the purposes of this IWMP from data on volumes landfilled at Devon Valley and data on recyclables transported to Kraaifontein IWMP

<sup>11</sup> Transported to CoCT's Kraaifontein IWMP

<sup>12</sup> Transported to Huis Horison recycling facility in Stellenbosch

Figure 9 summarises the key aspects of waste management in Stellenbosch. The bulk of the waste is landfilled at the Devon Valley site, with some recyclables diverted via a limited separation-at-source programme. Recyclables collected via this programme are transported across the municipal boundary to Kraaifontein IWMF, which consists of a materials recycling facility (MRF) as well as bulk transfer facilities for residual waste that is shipped to CoCT's Vissershok landfill site.

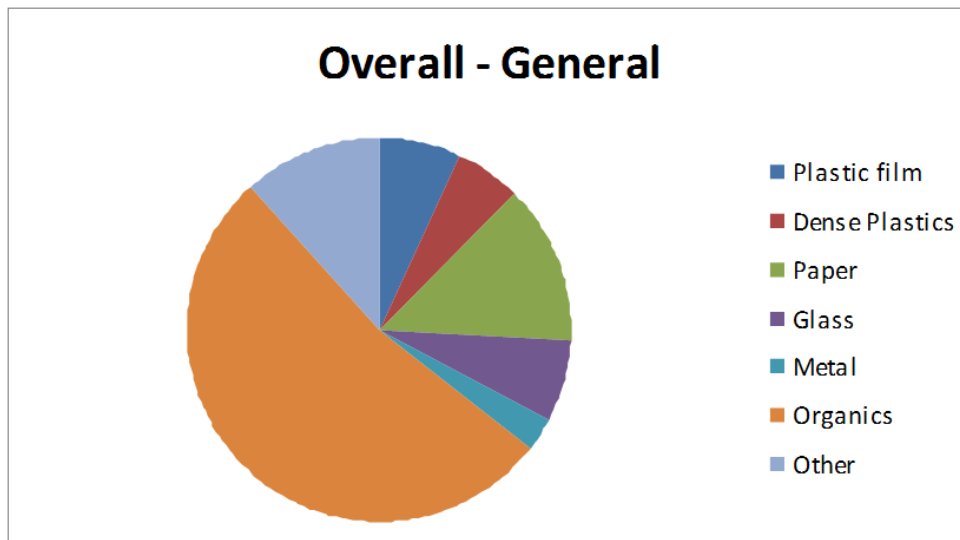
There is also some diversion of waste from landfill via collection of recyclable materials from the landfill site by the informal sector (not specifically identified in the diagram), and through an independent recycler using a buy-back format (not specifically identified in the diagram). In addition, Huis Horison - a residential and sheltered-employment centre in Stellenbosch specialising in the holistic care of people with a primary intellectual disability – receives about 10% of Stellenbosch Municipality's separated-at-source dry recyclables and sells them.



**FIGURE 9: STELLENBOSCH MUNICIPALITY BASE CASE OVERVIEW**

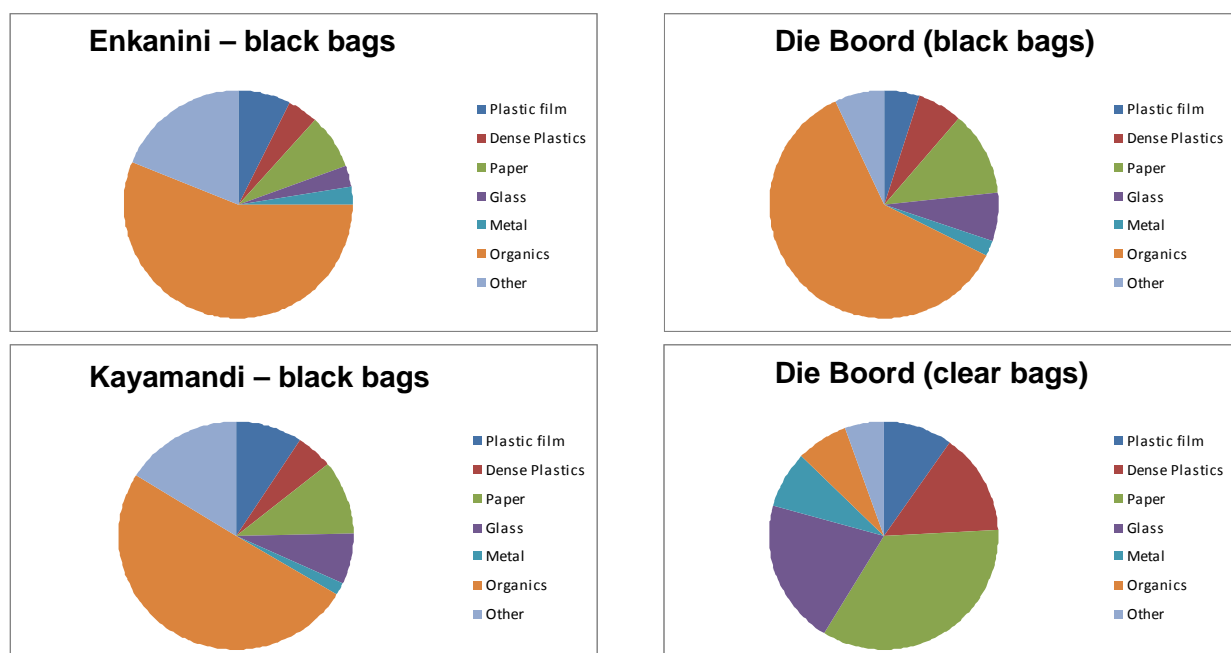
## 6.2. Domestic waste characterisation

A waste characterisation study conducted in 2012 highlighted that, on average, the domestic waste generated (i.e. collected in black bags) has a high organic waste content (Figure 10).



**FIGURE 10: AGGREGATED RESULTS FROM WASTE CHARACTERISATION STUDY FOR DOMESTIC WASTES**

Figure 11 shows the specific results obtained from some of the geographical areas (i.e. wards). This indicates a reasonable level of separation of recyclables based on the samples obtained from the clear bags where source separation has been initiated (i.e. Die Boord General vs Die Boord Recycling in Figure 11). Furthermore, paper, glass and plastic are the biggest portion of recyclables recovered from the pilot separation at source programme. However, all of these diagrams indicate that organics form a significant portion of the mixed waste collected, and should direct focus of Stellenbosch Municipality's planning.



**FIGURE 11: SAMPLE RESULTS FROM WASTE CHARACTERISATION STUDY**



### 6.3. Municipal service delivery: Status and challenges

**Error! Reference source not found.** below gives an indication of the current levels of service delivery across the municipality, based on a municipal survey done in 2014. Door-to-door collection is the principal mode of service delivery for refuse removal in formal areas. The municipality services 100% of the formal households using its own resources, and provides collection and disposal services to the bulk of the commercial community. From the municipal survey, 12% of the municipality (5,480 households) do not receive a municipal waste collection service. **This is a key area that needs to be addressed over the next five years.**

**TABLE 7: STELLENBOSCH MUNICIPALITY SERVICE DELIVERY OPTIONS**

Area (km <sup>2</sup> )	812
Number of wards	22
<b>Total households</b>	<b>45,702</b>
Formal households	71%
Informal Households	22%
Shack in backyard	7%
Refuse removal	
Weekly	88%
Less Frequent	2%
Own dump	5%
None	1%
Backlog (households)	5,480

The municipality offers two main types of residential waste collection – 240l wheelie bins for formal households, and 6m<sup>3</sup> communal skips in less accessible informal areas. The access to some of the informal areas has always been a challenge due to limited road access, and the communal areas around each skip tends to be strewn with litter. Other alternative waste service delivery options have been tested within some of the informal areas, with good success such as the bokashi pilot programme, where kitchen waste generated was treated with bokashi (sawdust inoculated with bacteria capable of breaking down organics rapidly) and then collected for production of compost (von der Heyde, et al., 2014). The Bokashi pilot programme highlighted the fact that implementing localised solutions for **waste management in informal settlements should be investigated further, and will be another key area that will be addressed over the next five years.**

In addition, a limited separation-at-source program has been rolled out in Brandwacht, Dalsig, Die Boord and Krigeville. Residents currently have to collect the clear bags from the municipal offices. The filled bags collected are then collected and the bulk sent across the municipal boundary to the Kraaifontein IWMF (with 10% sent to Huis Horison). The municipality is currently using its own vehicles and staff for the collection and transport as an added-on service.

Table 8 gives an overview of the service delivery (waste collection) options per area across the municipality. Although the bulk of the waste is generated within close proximity to the landfill site, transporting waste from outlying areas such as Franschoek (and its surrounds) has significant cost implications for the Stellenbosch Municipality. Currently all of the waste generated in the Franschoek area is transported over the Jonkershoek Mountain range (across the Helshoogte Road) to the Devon Valley landfill site. **Therefore, a solution that minimises the transportation costs of waste generated in Franschoek would lead to significant cost savings for Stellenbosch, and would be a priority area to be integrated into future plans.**

**TABLE 8: STELLENBOSCH MUNICIPALITY WASTE SERVICE DELIVERY OPTIONS**

<b>Area</b>	<b>Wards</b>	<b>Households (formal/informal)</b>	<b>Domestic Waste</b>	<b>Garden Waste</b>	<b>Builders' rubble</b>	<b>Recyclables</b>	<b>Average one way distance to DV (km)</b>
<b>Central</b>	4-17, 21-22	Formal	240L Wheelie Bins	Drop-off (DV)	Drop-off (DV)	Limited two bag system	6.6
	12, 14, 15	Informal	6m <sup>3</sup> skips	None	None	None	6.6
<b>Franschhoek</b>	1, 2, 3	Formal	240L Wheelie Bins	None	None	None	34
<b>Langrug</b>	2	Informal	6m <sup>3</sup> skips	None	None	Informal sector driven	32
<b>South</b>	20	Formal	240L Wheelie Bins	None	None	None	8
<b>Klapmuts</b>	18	Formal	240L Wheelie Bins	Drop-off	Drop-off	None	20
<b>Devon Valley</b>	19	Formal	240L Wheelie Bins	Drop-off (DV)	Drop-off (DV)	Limited two bag system	1

## 7. Immediate opportunities and plans

### 7.1. Activities commenced in 2014/2015

A number of projects were initiated during the 2014/2015 financial year to improve service delivery and waste management in Stellenbosch Municipality.

Stellenbosch Municipality commenced this process by ensuring that the newly constructed cell (Cell 3) at the Devon Valley landfill is well managed and operated in terms of the waste management licence conditions, and also that the existing closed cells are appropriately remediated.

Additional projects were initiated to drive diversion of waste from landfill, including the production of compressed earth blocks (CEBs) from stockpiled clay and builders' rubble at the Devon Valley landfill. Furthermore, a study to investigate the feasibility of Waste to Energy (WtE) and a detailed Municipal System's Act (MSA), Section 78 (3) study, that will consider the viability of alternative waste management processes and associated service delivery mechanisms, have been initiated. Refer to Table 9 for these and other projects underway. The total investment in these immediate opportunities and plans came to over R20,000,000.

TABLE 9: LIST OF CURRENT PROJECTS 2014/2015

NWMS goal addressed	Project name	Description	Cost to Stellenbosch Municipality	Contractor	Impact/Benefit to Stellenbosch
1, 3	Crushing of clean builders' rubble	Crushing of builders' rubble and stockpiling/landfilling	TBC	Reliance Soil and More	<ul style="list-style-type: none"> <li>• Avoids landfill disposal and effective use of landfill airspace</li> </ul>
1, 3	Compressed Earth Blocks (CEBs) from rubble and clay	Production of compressed earth bricks from clay and builders' rubble at the landfill as a one year pilot project	R3,700,000	Use-It	<ul style="list-style-type: none"> <li>• Avoids landfill disposal of clay</li> <li>• Production of alternative building material (environmental savings)</li> </ul>
1, 3	Chipping of greens and garden wastes	Chipping of greens at the landfill site and transporting to contractor's composting facility	R316/tonne (approximately R1,100,000 based on garden waste projection)	Reliance Soil and More	<ul style="list-style-type: none"> <li>• Avoid landfill disposal</li> <li>• Reduces carbon emissions from avoiding decomposition of garden waste into methane in the landfill</li> <li>• Contributes to green economy by generation of compost</li> </ul>
1, 3	Waste-to-Energy feasibility study	Investigation of waste-to-energy options for Stellenbosch with the possibility of locating the facility at Klappmuts	R500,000	Worley Parsons	<ul style="list-style-type: none"> <li>• Clear action plan for Stellenbosch to implement waste-to-energy (organic waste and residual waste)</li> </ul>
3	Landfill gas-to-energy feasibility study	Landfill gas capture at the landfill, cleaning and feeding to a generator to produce electricity for the Wastewater Treatment Works (WWTWs).	R1,600,000	Aurecon	<ul style="list-style-type: none"> <li>• Feasibility of exploiting landfill gas to generate electricity becomes more feasible</li> </ul>

NWMS goal addressed	Project name	Description	Cost to Stellenbosch Municipality	Contractor	Impact/Benefit to Stellenbosch
2	Operation and Management of Stellenbosch Landfill Site	Landfill operation and management, including data management	R5,400,000 per year	Interwaste Environmental Solutions	<ul style="list-style-type: none"> <li>• Effective delivery of waste services</li> <li>• Compliance with Waste Act</li> </ul>
2	Beautification of Landfill	Improvement of aesthetics of landfill (entrance)	R 2,650,000	N1 Waterproofers and Painters	<ul style="list-style-type: none"> <li>• Effective delivery of waste services</li> <li>• Compliance with Waste Act</li> </ul>
2	Cutting and shaping of old cells 1 & 2	The reshaping of the cells to develop gentler slopes for the capping and rehabilitation processes.	R 10,250,000	Amandla	<ul style="list-style-type: none"> <li>• Effective delivery of waste services</li> <li>• Compliance with Waste Act</li> </ul>

## 7.2. Other short term activities: 2016/2017

To ensure that the reduction and diversion of waste continues, Stellenbosch municipality is scheduled to initiate at least five projects in the short term (2016/2017). Table 10 below presents a list of such projects that have been planned.

**TABLE 10: LIST OF PROJECTS TO COMMENCE BY 2016**

NWMS goals tackled	Project name	Description	Expected Cost	Expected Project Date	Impact/benefit to Stellenbosch
1, 2, 6	Section 78 (3) Study of the Municipal Systems Act (No 32 of 2000)	Study to investigate service delivery mechanism for alternative waste management	R1,000,000	July – November 2015	<ul style="list-style-type: none"> <li>• Sound financial management for solid waste management in Stellenbosch</li> <li>• Effective delivery of services based on affordability and risk to the municipality</li> </ul>
2, 7	Rehabilitation and capping at Devon Valley	Rehabilitation and capping of cells 1 and 2 (and future work on cell 3)	R50,000,000	February 2016	<ul style="list-style-type: none"> <li>• Effective delivery of waste services</li> <li>• Compliance with NEM:WA before landfill closure</li> </ul>
1, 3, 6	Franschhoek drop-off	Development of a local drop-off site for diversion of recyclables, and also allow for composting of organic waste within the Franschhoek area	R20,000,000	February 2015	<ul style="list-style-type: none"> <li>• Reduction of waste management costs to Stellenbosch through reduced transport costs</li> <li>• Landfill diversion – organics, builders' rubble and recyclables</li> </ul>
1, 3	Materials Recycling Facility (MRF) Design and Planning	Study to investigate construction and operation of a local MRF within the Stellenbosch Municipality boundaries (Klapmuts being investigated as a viable site).	R100,000	February 2015	<ul style="list-style-type: none"> <li>• Avoids landfill disposal of wastes</li> <li>• Contribution to green economy through creation of local jobs</li> <li>• Improved recycling and waste minimisation within Stellenbosch</li> </ul>
2	Landfill Gas-to-Energy	landfill gas capture at the landfill, cleaning and feeding to a generator to produce electricity for WWTW	R32,000,000	2017	<ul style="list-style-type: none"> <li>• Effective use of landfill</li> <li>• Reduction of carbon emissions from avoiding decomposition of organic waste into methane in the landfill</li> <li>• Generation of renewable energy</li> </ul>

### 7.3. Area cleaning

Area Cleaning in Stellenbosch Municipality generally entails the cleaning of all illegal dumping (including builders' rubble)/ litter picking/ trimming of weeds on sidewalks/ cleaning of municipal street bins on all municipal properties, parks and public open spaces. The Area Cleaning Department is crucial and contributes towards the cleanest town as well as greenest valley. To date there has been limited synchronisation of efforts between the solid waste department (under Engineering and Technical Services) and Area Cleaning (under Community and Protection Services).

Area Cleaning has limited human resource capacity and consists of two permanent positions. The first is the Head: Parks, Rivers and Area Cleaning and the second is the Assistant Superintendent Area Cleaning. The rest of the workforce in the department consists of services outsourced to the private sector and mostly Extended Public Works Programme (EPWP) employees - employed typically on a three-month basis. The above present itself as a significant challenge for the department as the training, health and safety gear for the EPWP workers has to be organised every three months. In addition, the commitment of workers is limited due to the lack of stability offered by contract.

The Community and Protection Services has put together a proposal for Stellenbosch Municipality, as it would be more financially efficient if people are employed on a year. The marginal cost increase for the annual contract will outweigh the benefits gained (i.e. R325 000 vs R500 000 currently for contract workers) such as staff retention, less training time required which will lead to more time spent on cleaning, better upkeep and maintenance of vehicles and the ability to be innovative and plan effectively. For example, having permanent drivers/supervisors dedicated to specific areas would lead to capturing the hotspots and finding solutions to challenges faced for area cleaning problem.

Additional projects in the pipeline include

Mapping of complaints/illegal dumping on a GIS layer. This will enable effective planning for EPWP workers priority areas, as well as identification of resources required. This area could also be potential area of collaboration with the Solid Waste Department for the appointment of Environmental Monitoring Inspectors (EMIs) as discussed in Section 3

The Area Cleaning Department has appointed a consultant to draft a tender for service delivery in informal areas such as Kayamandi, Klapmuts and Langrug which is meant to be implemented from the 1<sup>st</sup> of August 2015.

It is worth noting that the amount of waste collected by the Area Cleaning Department is currently not accounted for by the Solid Waste Department in Stellenbosch. The Area Cleaning Department has not provide quantities of the waste collected, as it is currently not documented. This is important to highlight as the waste collected will have implications on the landfill airspace and could be diverted more effectively from landfill disposal. More details on the Area Cleaning Department plans are available separately on request.

A key recommendation would be to establish a formal collaboration channel between the Solid Waste and Area Cleaning Department within Stellenbosch Municipality as this might lead to resource sharing, and more effective planning for a cleaner environment. This is particularly the case for builders' rubble dumped illegally, as well as cuttings from parks and open spaces.



## 8. Towards Integrated Waste Management in Stellenbosch Municipality

Stellenbosch Municipality is adopting a systems-based approach to waste management planning in the medium to longer term. This allows the municipality to understand the full cost of waste management, and ultimately identify what is needed to fund waste management services, including potentially the implementation of cost-reflective tariffs. To enable Stellenbosch to adopt this integrated approach to waste management planning, the municipality engaged The GreenCape (a Sector Development Agency) to evaluate the viability of different alternative waste treatment options. GreenCape was tasked to do this since it is currently developing an Integrated Waste Management Decision Support Tool (IWM-DST), specifically aimed at assisting municipalities to implement integrated waste management. The IWM-DST provides guiding principles for integrated waste management. To this end, it contains a set of models that can assist in determining the choice and scale of waste management technologies, with an understanding of the financial, economic, social and environmental implications of different municipal solid waste management system configurations, and technology choices based on a full life cycle basis.

GreenCape recommended a full life cycle based approach because it enables the complete evaluation of a waste management system - from generation, to collection, transport, treatment and/or final disposal in an integrated manner as illustrated in Figure 12 **Error! Reference source not found.** It is important to consider the full waste management system to understand the system-wide implications of any technology choice (i.e. what collection systems might be needed, what sorting systems etc.) for the successful application of these technologies.

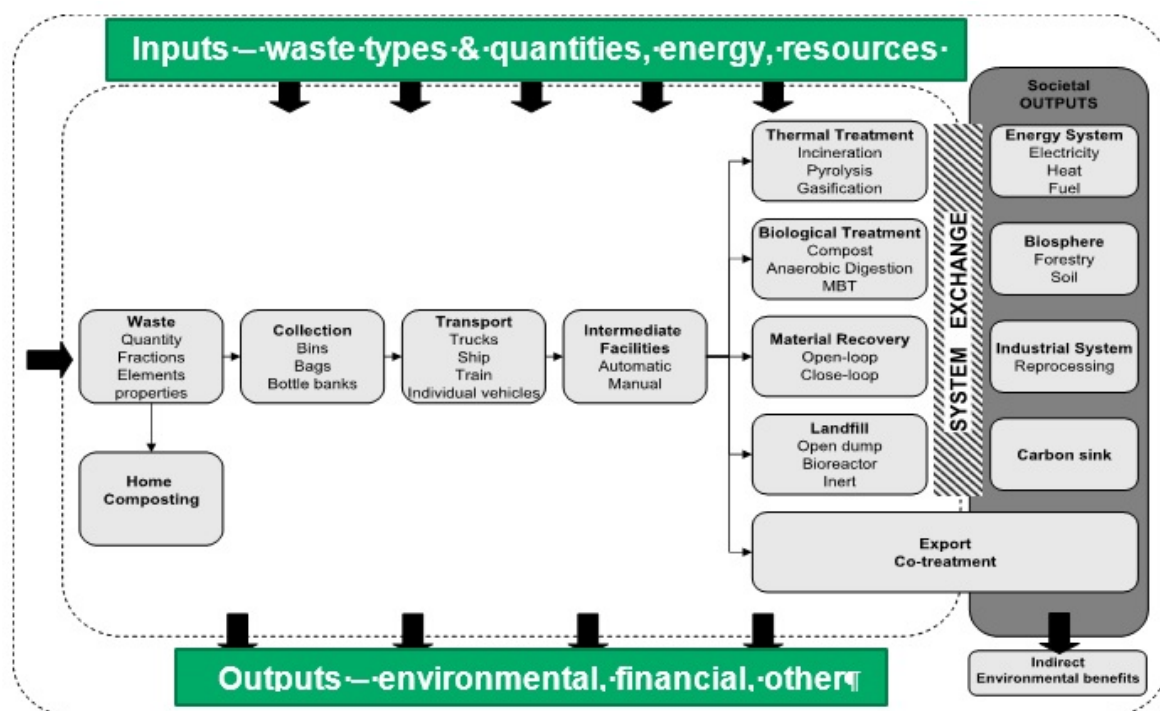


FIGURE 12: SYSTEMS-BASED APPROACH FOR INTEGRATED WASTE MANAGEMENT (GENTIL ET AL, 2010)

A number of steps were carried out in order to identify the implications of different waste management trajectories for Stellenbosch. The specific steps were:

- (i) determination of status quo/waste data;
- (ii) projection of waste generation based on population data (presented in Section 4);
- (iii) identifying viable alternative treatment options; and
- (iv) modelling of scenarios for Stellenbosch Municipality (described in Sections 8.1-8.3 to follow)

The individual steps taken are discussed in more detail below.

## 8.1. Status quo determination

The determination of the status quo was done to establish a baseline for waste management in Stellenbosch. The two main aspects of the status quo were:

- Understanding current waste generation (quantities, types etc.)
- Mapping of the complete Stellenbosch waste management system (collection and transport models, available treatment, etc.)

Results of this phase are presented in Figure 13 overleaf, which summarises the current waste management system in Stellenbosch Municipality.

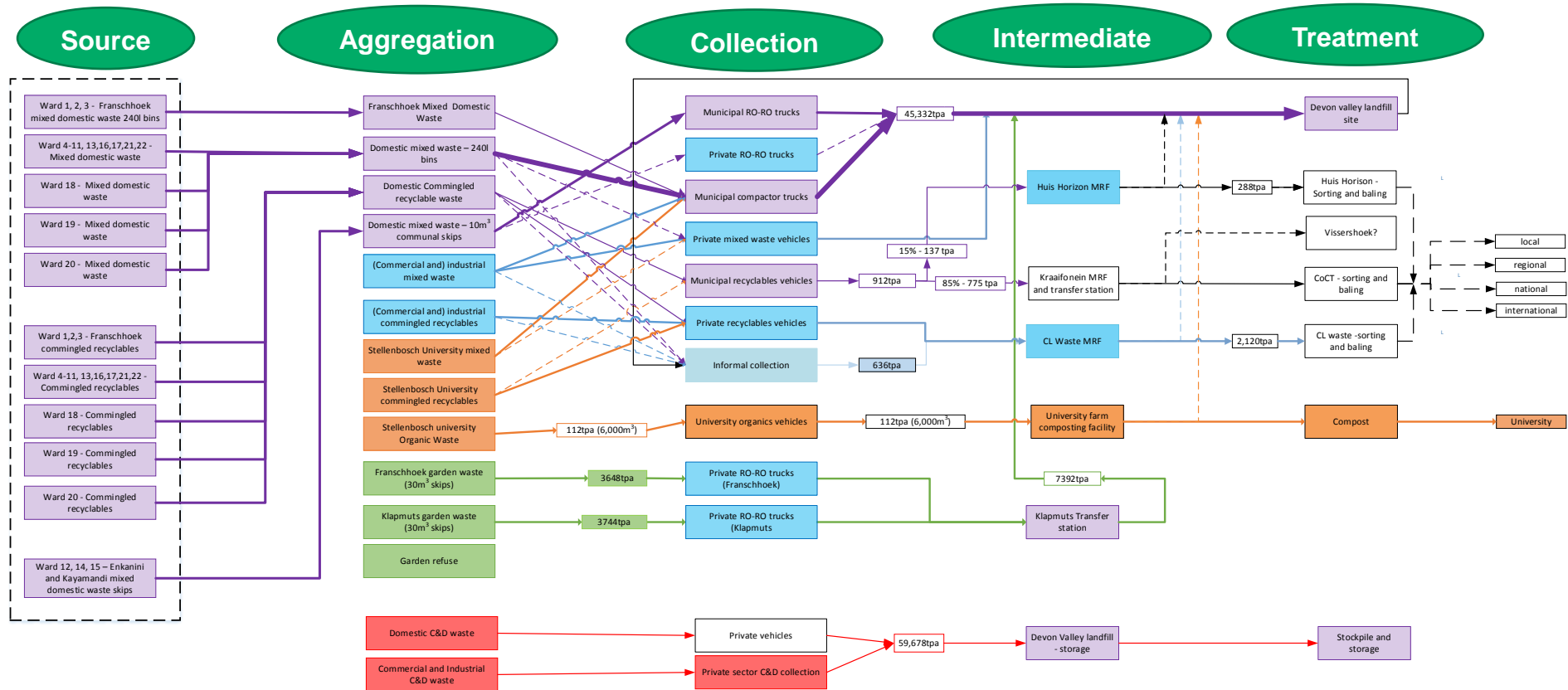


FIGURE 13: STELLENBOSCH MUNICIPALITY WASTE MANAGEMENT SYSTEM (GREENCAPE, 2014)

## 8.2. Determination of potential alternative waste management scenarios

Alternatives for the waste management future of the municipality were identified through a stakeholder engagement processes involving:

- Stellenbosch Municipality – represented by the solid waste manager and the deputy mayor. The Portfolio Councillor: Strategic & Corporate Services was also present
- Stellenbosch University and the Sustainability Institute
- Dutch waste experts from the Netherlands Ministry of Infrastructure and Environment
- The GreenCape Sector Development Agency

The first integrated waste management system that was evaluated was the base case (i.e. current status of the waste management system of Stellenbosch Municipality). This baseline was then extrapolated to determine a business-as-usual (BAU) scenario (Scenario 0) which represents the expected impacts if the municipality continues with current waste management practices.

Four possible alternative waste management scenarios were then developed<sup>13</sup>, after taking into account the vision and drivers for Stellenbosch Municipality. These were:

1. **Scenario 1:** Diversion of builders' rubble via brick making (see Figure 14) and garden waste via chipping and composting, respectively (see Figure 15).
2. **Scenario 2a&b:** Increased recycling (achieved by greater separation at source)
3. **Scenario 3a&b:** Organic waste treatment (via anaerobic digestion) in addition to increased recycling
4. **Scenario 4:** Combination of organic waste treatment, incineration and increased recycling via a collaborative approach with neighboring municipalities.

The scenarios are depicted in Figure 16 are described in more detail in Table 11.

<sup>13</sup> The four scenarios selected were based on discussions with a number of stakeholders. However, additional information required was sourced or assumed from a variety of sources (information available in a separate report, and available on request). Therefore, verification or amendment of some of these, or conducting sensitivity analyses to investigate the potential range of outcomes may be necessary.



**FIGURE 14: COMPRESSED EARTH BRICK MANUFACTURE AT DEVON VALLEY**



**FIGURE 15: GARDEN WASTE CHIPPING AT DEVON VALLEY**

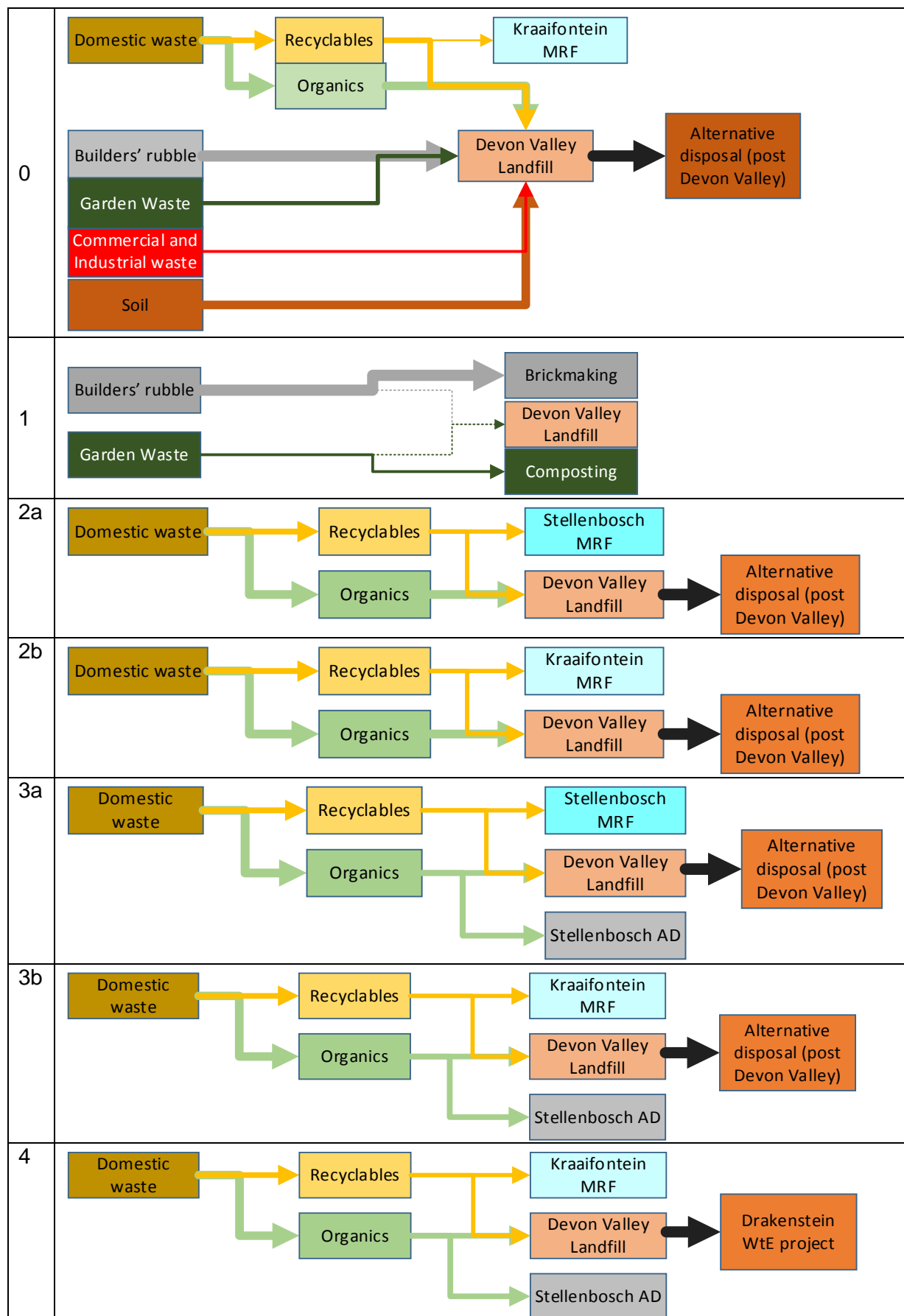


FIGURE 16: SCENARIOS SELECTED FOR INVESTIGATION <sup>14</sup>

<sup>14</sup> Scenarios 2-4 also all include Scenario 1 – diversion of rubble and garden waste.

TABLE 11: EXPLANATION OF SCENARIOS MODELLED VIA THE IWM-DST

Scenario	Description
0: Business as usual (BAU)	Landfilling of bulk of the waste until Devon Valley is full and then use alternative landfill outside of municipality (CoCT, Drakenstein or regional landfill).
1: Diversion of builders' rubble and garden waste	Builders' rubble is diverted to production of compressed earth blocks (CEBs) and garden refuse chipped and transported to a composting facility. The bulk of the remaining waste (i.e. domestic waste) continues to be landfilled at Devon Valley, and is diverted to another landfill <sup>15</sup> site once Devon Valley reaches capacity.
Scenarios 2-4 assume that builders' rubble and garden waste are taken care of (based on Stellenbosch Municipality plans at the time of modelling (i.e. Scenario 1), and hence focus on domestic waste treatment.	
2a and 2b: Diversion of recyclables to achieve 25% NWMS target	Increased separation at source (i.e. households), with recyclables sent to a new local materials recovery facility (MRF) still to be constructed (scenario 2a) or to the CoCT's Kraaifontein IWMF (scenario 2b)
3a and 3b: Diversion of recyclables to achieve the 25% NWMS target and an additional 25% diversion achieved via organic waste diversion to a waste to energy (anaerobic digestion-AD) facility	These interventions increased recovery of recyclables and of organic waste. The residual organic-rich waste is sent to a facility where it is treated via anaerobic digestion (AD) to produce biogas, which is then combusted to produce electricity.
4: Regional collaboration – 25% recycling, 25% anaerobic digestion and 50% (i.e. remainder of the waste) is then sent to Drakenstein WtE (incineration)	This scenario assumed that the incineration facility will be operational, and a potential for collaboration between the CoCT (through their IWMF), Drakenstein (WtE) and Stellenbosch (AD) will be achieved.

### 8.3. Modelling and evaluation of alternative waste management scenarios

The following were identified by the stakeholders as criteria for the evaluation of the above (and any other) scenarios (Section 8.2)

- **Financial:** to determine affordability. Assessed in terms of the net present value (NPV) of the waste management system. Considers capital and operating cost over a 20-year period.
- **Environmental:** to determine sustainability. Assessed in terms of the contribution to climate change resulting from greenhouse gas emissions, measured in carbon dioxide equivalent emissions (CO<sub>2</sub>eq).

<sup>15</sup> In these scenarios this is assumed to be the City of Cape Town's proposed Kalbaskraal landfill site along the West Coast, once Devon Valley is full. However, an additional possibility that has been identified is immediate partial diversion to Bellville in order to stagger the shift to an external landfill.

The basis for the financial modelling (i.e. the principles and equations used) was primarily the United States Environmental Protection Agency's (EPA's) handbook on full cost accounting for solid waste (USEPA, 1997). This is considered one of the key reference texts for waste management system costing internationally. The methodology has also been used for the feasibility studies done by consulting firms previously for, among others, the City of Cape Town and Stellenbosch Municipality.

The environmental analysis of waste management used a full life cycle analysis (LCA) approach based on a model developed in Denmark for LCA of waste management systems. This so-called EASETECH model considers all aspects of waste management including the inputs and emissions from supporting processes. The model was adapted to South Africa (e.g. by including information on the local energy mix).

Key assumptions made for the modelling of the alternative waste management systems include:

- Estimation of capital costs – based predominantly on European figures as presented in the Knowledge Product for Waste Management prepared for the South African national Department of Environmental Affairs (DEA, 2014).
- It was assumed that the uptake of recyclables by the CoCT and incineration in Drakenstein once Devon Valley is full would be infinite i.e. these municipalities would automatically be able to accept all the waste. It also does not consider step changes or disturbances, e.g. sudden increases in landfill tariffs due to imposition of a landfill tax based on potential changes in legislation.

Detailed information on the models and modelling work can be found in the case study report (GreenCape, 2014).



## 9. Key findings: analysis of alternatives waste management systems

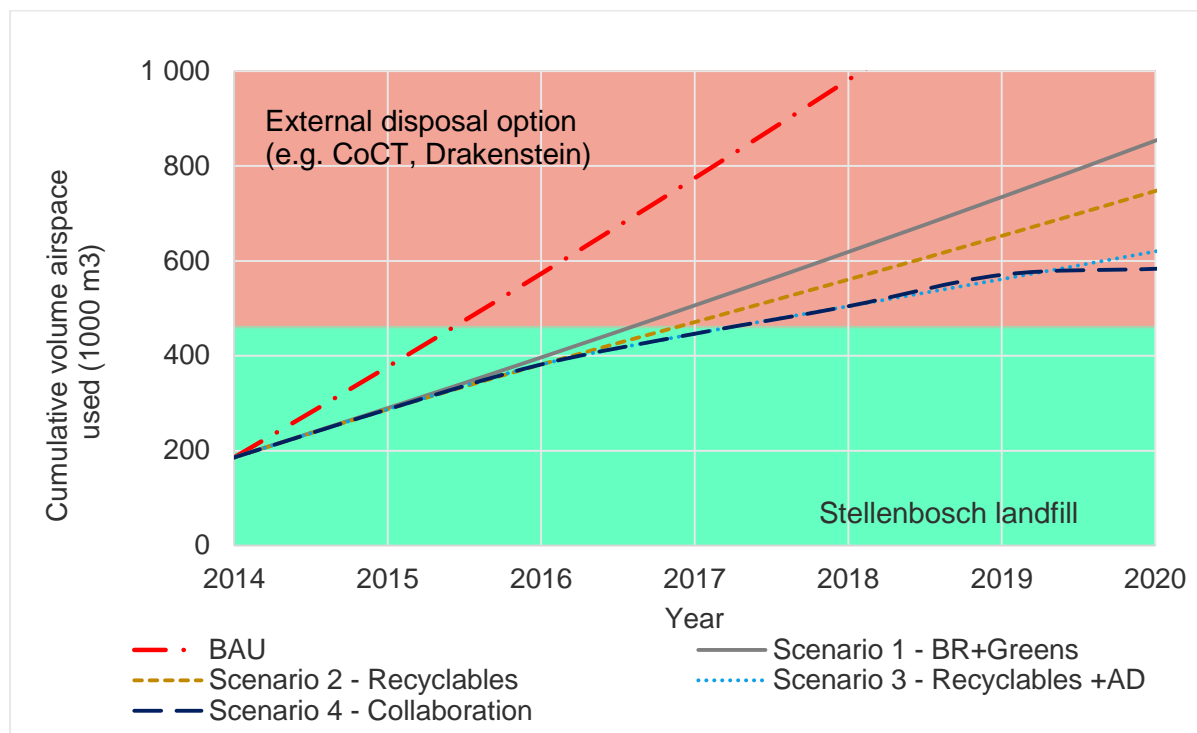
This section provides an overview of the results of the analysis of alternative waste management systems outlined in the previous sections.

### 9.1. Airspace demand

The airspace requirements for the different scenarios over five years and 20 years are shown in Figure 17 and Figure 18, respectively. The landfill demand was estimated based on minimal compaction of the landfill, with the domestic waste component assumed to have a density of 0.6 tonnes/m<sup>3</sup> (i.e. each tonne of domestic waste would require 1.7m<sup>3</sup>) and garden waste assumed to have a density of 0.2 tonnes/m<sup>3</sup> (i.e. each tonne of garden waste would require 5m<sup>3</sup>).

It can be seen that even with aggressive diversion (Scenarios 3 and 4), the extension of the life span of the Devon Valley landfill is minimal. The main reason for this is the amount of time required to implement any of the solutions in Scenarios 3 and 4. In addition to the time required for municipal processes, environmental authorisations can take up to two years, suggesting a lead-time of at least four years.

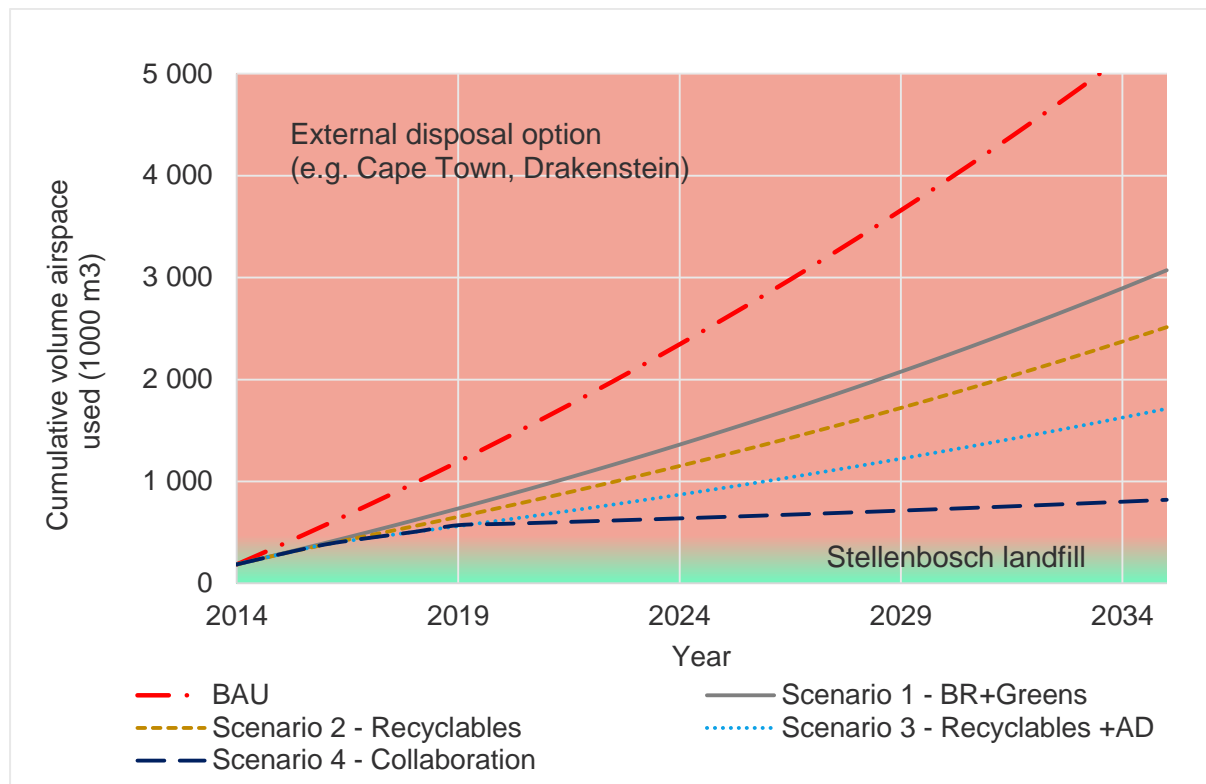
**This suggests that regardless of which scenario is implemented; Stellenbosch will be required to rely on other municipalities for waste management solutions in the near term, i.e. within two years. Note that this period could be extended with improved compaction during landfill, but this does not change the fact that solutions outside of Stellenbosch's own boundaries will be required.**



**FIGURE 17: CUMULATIVE VOLUME OF WASTE LANDFILLED FOR VARIOUS SCENARIOS (5 YEAR PROJECTION)**

Both Figure 17 (5 years) and Figure 18 (20 years) highlight the need for an urgent decision on the way forward in terms of alternatives to Devon Valley landfill. Such a decision is needed for the necessary steps to commence which are required for authorisation processes for any alternative service delivery mechanism (and environmental authorisations, if relevant).

There are potential benefits and risks associated with relying on the external solutions provided by, for example, the CoCT and Drakenstein as this does not require large capital requirements immediately. In the longer term, Stellenbosch Municipality will be required to invest in the necessary infrastructure for disposal to avoid continued dependence on external disposal solutions (i.e. outside of its own municipal boundaries).



**FIGURE 18: CUMULATIVE VOLUME OF WASTE LANDFILLED FOR VARIOUS SCENARIOS (20 YEAR PROJECTION)**

## 9.2. Financial implications of alternative waste management scenarios<sup>16</sup>

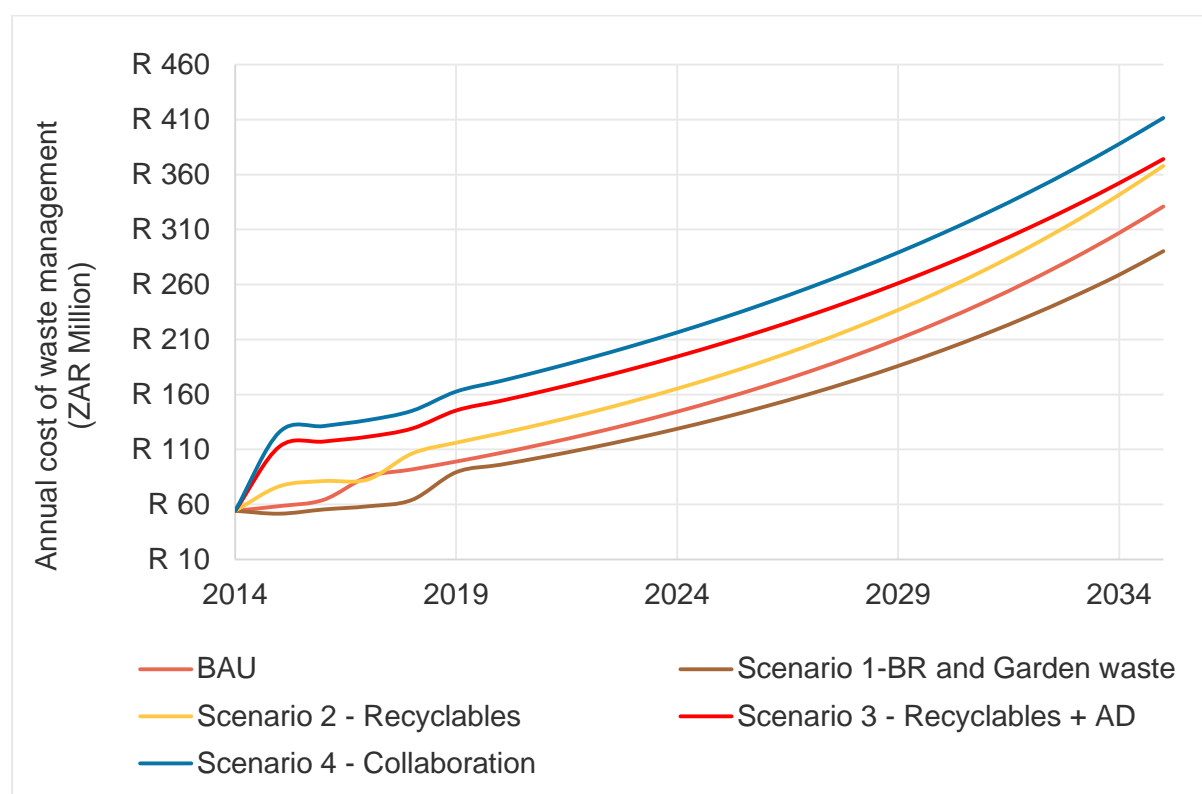
The required capital costs for development of the additional infrastructure of the different scenarios (1-4) is presented in Table 12. Scenarios 3 and 4 have significantly larger costs of capital due to the infrastructure require for waste-to-energy initiatives.

<sup>16</sup> The financial model used by GreenCape assumes that Stellenbosch provides its own funding. However, it is more likely that external funding such as loans or external investment (e.g. PPPs) may be required. This would result in a higher cost of capital and most likely in a higher cost to Stellenbosch Municipality than the cost estimates presented in this document. Further work is underway to examine the cost implications for Stellenbosch Municipality of different funding mechanisms.

**TABLE 12: TOTAL COSTS AND RELATIVE COST RATIOS ASSOCIATED WITH EACH SCENARIO TAKING INTO ACCOUNT THE TIME VALUE OF MONEY (I.E. NPV) OVER 20 YEARS <sup>17</sup>**

	Major capital expenditure required	Total costs over 20 years	Cost ratio relative to the Business as Usual
<b>Business as usual</b>		R 1 960 000 000	1.000
<b>Scenario 1</b>	R 16,000,000	R 1 720 000 000	0.874
<b>Scenario 2a</b>	R 64,000,000	R 2 230 000 000	1.13
<b>Scenario 2b</b>	R 18,000,000	R 2 110 000 000	1.08
<b>Scenario 3a</b>	R 230,000,000	R 2 860 000 000	1.31
<b>Scenario 3b</b>	R 180,000,000	R 2 580 000 000	1.46
<b>Scenario 4</b>	R 220,000,000	R 2 590 000 000	1.32

Figure 19 illustrates the cumulative annual cost of each of the different scenarios over a 20 year period.



**FIGURE 19: ANNUAL COST OF WASTE MANAGEMENT OVER 20 YEARS**

The key points highlighted from the analysis are:

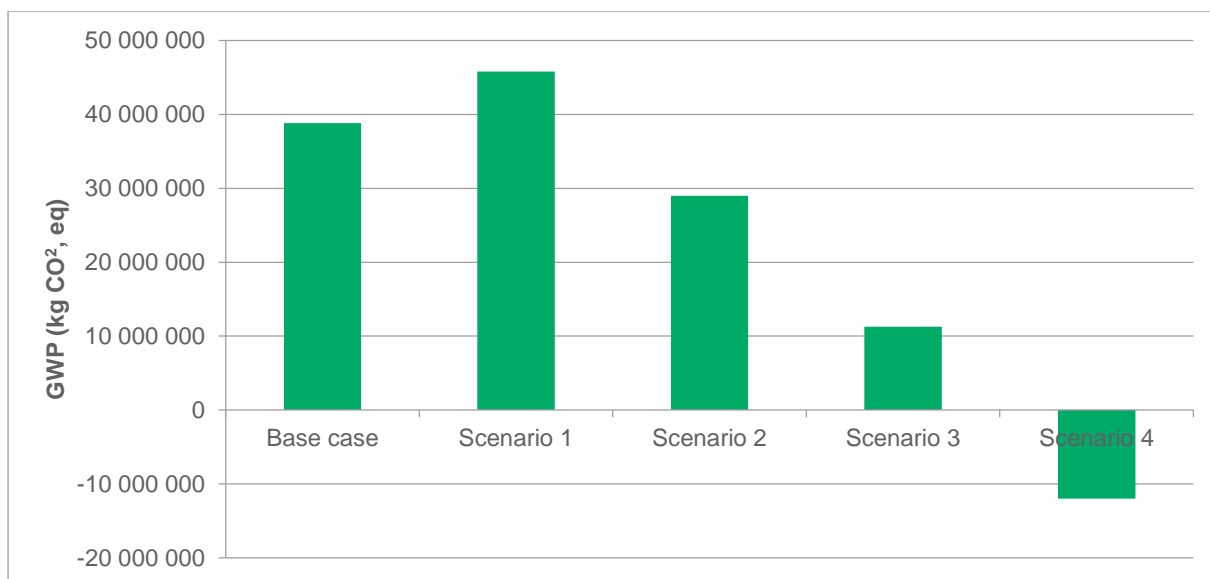
<sup>17</sup> Assuming Stellenbosch Municipality provides its own funding for capital expenditure.

- It is evident that BAU requires substantial dependency on other municipalities and is not the least expensive solution. Furthermore, this scenario (and all others) assumes that other municipalities will be able to absorb Stellenbosch's waste indefinitely and at approximately the same relative cost – both of these are unlikely and present substantial (financial and service delivery) risks to the municipality.
- Scenario 3 and 4 will result in a substantial increase in the costs of waste management (approx 30-40% more), and does not remove Stellenbosch's reliance on other municipalities for landfill disposal for the residual wastes post anaerobic digestion (AD).
- Dependence on neighbouring municipalities in the long term might prove costly, especially if disposal tariffs and transport costs increase substantially.. This is likely to happen based on recent regulation (R636 of NEM: Waste Amendment Act, No 26 of 2014) of landfill containment barriers which are set to increase substantially the costs of building new landfill sites.
- Stellenbosch Municipality will still require landfills despite aggressive waste minimisation efforts for the disposal of residual wastes – this is consistent with international experience. It is therefore imperative to continue efforts to identify suitable landfill site in the long term, alongside aggressive waste minimisation efforts.

### 9.3. Environmental impacts of different alternative waste management scenarios

Figure 20 presents results of the environmental analysis in terms of greenhouse gas emissions measured in terms of global warming potential (GWP) of each scenario using 2020 as the reference year. The analysis uses the assumption that alternative treatment such as AD would be implementable in Stellenbosch Municipality within five years. A decrease (saving) of approximately 15,000 tonnes of CO<sub>2</sub> per annum (or 30%) is achieved by increasing the rate of recycling (25% of domestic waste recycled) from moving from Scenario 1 to Scenario 2. Comparing Scenario 1 and Scenario 3 shows a decrease (saving) of approximately 35,000 tonnes of CO<sub>2</sub> per annum (or almost 75%) by implementing both recycling (25%) and diversion of organic waste via anaerobic digestion (25% of the domestic waste stream).

The potential added advantage of “going green” (i.e. by mitigating the carbon emissions via recycling and anaerobic digestion – Scenarios 2-4) is, for example, the possibility of selling the CO<sub>2</sub> savings on the voluntary carbon market.



**FIGURE 20: VISUAL REPRESENTATION OF THE GLOBAL WARMING POTENTIAL (GWP) IN KG CO<sub>2</sub>,EQ FOR THE BUSINESS AS USUAL AND SCENARIOS 1-4**

## 9.4. Summary of findings and implications

In summary, although Scenarios 1 and 2 may provide for potentially cheaper solutions in the short term, they are not strictly aligned with Stellenbosch Municipality's long-term vision and goals, and the goals set out in the NWMS. Scenarios 3 and 4 start to give an indication of the kind of costs involved in the shift towards alternative waste management practices with carbon emission reduction benefits. In addition, reliance on other municipalities (without an agreed collaborative arrangement in place) puts the municipality's ability to provide waste management services at risk, should the external facility default or become unaffordable.

Additional benefits of the various alternative waste management scenarios that have not been examined in this analysis include determination of the broader economic benefits to the municipality, such as job creation and opportunities for business development (including of SMMEs) within the municipal boundary, and within the region as a whole.

Seemingly unique challenges (but common to South Africa) include the population and income distribution. The investigation of opportunities for minimising costs by implementing solutions at source can both assist the municipality in achieving an extension of the life span of the landfill in the short term, but may also potentially provide cost savings, environmental and socio-economic benefits in the medium to long term. Although the analysis done considers centralised solutions, the municipality should examine the benefits of developing innovative localised solutions for areas such as Franschhoek where possible.

Finally, Scenario 4 proposes a collaborative approach between Stellenbosch, Drakenstein and the City of Cape Town. This would require alignment of planning between different municipalities, and can take different forms. Historically, District Municipalities are responsible for development of landfill sites where two or more municipalities within their district cannot identify or afford to build local landfills. In terms of landfill, this is a logical approach for Stellenbosch, as both Stellenbosch and Drakenstein – separated from the other municipalities in the Cape Winelands District – have struggled to identify suitable sites for local landfills. Taking this into consideration, the additional costs associated with transporting waste to a district site are a good motivation for reducing waste at source, and for considering alternative waste treatment technologies such as those proposed here. .

## 10. Implementation plan and resources required

To address the immediate challenges posed by the limited remaining landfill airspace and enable long term, sustainable integrated waste management, a proactive and impact-driven approach is needed consisting of both immediate actions as well as proper forward planning. Table 13 summarises these actions and how these are aligned with the goals of Stellenbosch Municipality and the National Waste Management Strategy (NWMS).

**TABLE 13: IMPLEMENTATION PLAN FOR STELLENBOSCH INTEGRATED WASTE MANAGEMENT SYSTEM**

Key: 

	Inception		Continuation
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Deliverables/milestones	Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
	1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
<b>Goal 1: Promote recycling and recovery of waste</b>										
Review separation-at-source pilot programme and develop strategy for way forward								Consultant	n/a	TBD
Roll out separation-at-source to medium-to-high income households <sup>19</sup>	30% (3,600 t/year)							Contractor	Bins, separate collection and transportation vehicles	R6,840,000
	70% (8,400 t/year)							Contractor		R16,000,000
	100% (11,250 t/year)									Contractor

<sup>18</sup> SWM – Solid waste manager, ASWM – Assistant SWM, EHP – Environmental health practitioner, WISP = Western Cape Industrial Symbiosis Programme

<sup>19</sup> 32% of population = medium-high income, assume 25% diversion in roll out, using R1900/tonne (de Wit, 2013) .

Deliverables/milestones		Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
		1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
Establish buy-back centres for low income households	Feasibility study (including collaboration between Stellenbosch and Dilbeek)								Consultant	n/a	TBD
	Construction, commissioning and operation of buy-back centres (if feasible);								Contractor	Shed, scales, balers	TBD
Establish chipping of garden waste	Devon Valley								Contractor	Electricity supply, chippers	TBD
	Klapmuts								Contractor		TBD
	Franschhoek								Contractor		TBD
100% diversion of builders' rubble	CEB pilot								Contractor		R3,700,000
	Multi-stakeholder strategy development								SWM & GreenCape	n/a	TBD
	Expand and extend CEB project								Contractor	TBD	TBD
	Divert C&D via roads, transport and human settlements departments								SWM & relevant municipal departments	TBD	TBD
	Investigate and use industrial symbiosis solutions								GreenCape /WISP	TBD	No cost to municipality assuming no pre-treatment is required
Divert Franschhoek waste at source	Feasibility study for Franschhoek recyclable drop-off and organic treatment								Consultant	n/a	R500,000
	Drop-off planning, design & construction, and operation (if feasible)								Contractor	TBD	R10,000,000

Deliverables/milestones		Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
		1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
	Anaerobic Digester construction, commissioning and operation (if feasible)								Contractor	TBD	TBD
Establish a material recycling facility (MRF) within Stellenbosch	Feasibility study for MRF								Consultant		R500,000
	Pilot study for MRF (400m <sup>3</sup> /month ca. 5 tonnes/day <sup>20</sup> )								Contractor (5-8 jobs)	Power supply, concrete slab 120m <sup>2</sup>	No cost to municipality
	Full development and implementation/rollout (30t/day) (if feasible)								Contractor (30-48 jobs?)	TBD	TBD
Establish waste-to-energy (WtE) facilities at Klappmuts – AD and other WtE treatment.	Feasibility study for a WtE facility at Klappmuts								Consultant	TBD	1,000,000
	Establishment and operation of WtE (if feasible) <sup>21</sup>								Contractor	TBD	35,000,000
Establish anaerobic digestion (AD) at Waste Water Treatment Works (WWTW)	Investigate collaboration with Stellenbosch Municipality Department of WWT								Consultant		TBD
	Feasibility study for AD								Consultant		TBD
	Construction, commissioning and operation (if feasible) <sup>22</sup>								Contractor	TBD	TBD
Develop organic waste treatment in informal settlements	Roll out Bokashi treatment and/or alternatives (e.g. worm farms) to 150 informal households								Contractor	Bokashi bins, bokashi meal, composting facility/	R540,000

<sup>20</sup> Assuming 22.5 operational days a month, and recyclables density of 0.3 tonnes/m<sup>3</sup> (or conversely a specific volume of 3m<sup>3</sup>/tonne)

<sup>21</sup> Will probably be dependent on/require MSA 78(3) process

<sup>22</sup> Subject to licensing and permitting requirements; optimistic as WWTW is going into a phase of non-AD.



Deliverables/milestones		Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
		1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
	Extend roll out of Bokashi treatment or alternatives to 10% of informal households								Contractor	Facilities or equipment for alternatives	R2,700,00
	Extend roll out of Bokashi treatment or alternatives to 25% of informal households								Contractor		R6,750,00
<b>Goal 2: Ensure the effective and efficient delivery of waste services</b>											
Increase waste services to rural dwellings (i.e. small holdings and farms) and ultimately achieve 95% service delivery target	Develop a strategy for providing waste services to rural dwellings								Consultant	Skips, vehicles	TBD
	Establish and rollout service to 50% of rural dwellings								Contractor		TBD
	Expand service delivery to 100% of rural dwellings								Contractor		TBD
<b>Goal 3: Develop legislative tools to enforce the Waste Act and other applicable legislation</b>											
Waste by-law for waste management in Stellenbosch (household, commercial and industrial)	Develop by-law								Consultant		R200,000
	Implement and enforce by-law								Municipality		TBD
	Review and up-date by-law								Consultant/ Municipality		TBD
<b>Goal 4: Sound budgeting and financing of waste management services</b>											
Conduct full cost accounting for waste services									Consultant		TBD

Deliverables/milestones		Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
		1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
Review and implement tariffs									Municipality		TBD
Allocate budget for infrastructure planning and waste service delivery									Municipality		TBD
Municipal Systems Act S(78)3	Commence investigation to determine appropriate service delivery mechanisms								Consultant		R1,000,000
	Implement service delivery mechanisms								Municipality & Contractors		TBD
<b>Goal 5: Ensure the safe and proper disposal of waste</b>											
Landfill closure, capping and rehabilitation	Cutting and reshaping of Cells 1 and 2								Contractors		R10,250,000
	Capping and rehabilitation of Cells 1 and 2								Contractors		R50,000,000
	Capping and rehabilitation of Cell 3								Contractors		
Landfill gas project	Obtain authorisations (including licences and permits)								Consultant		R32,000,000
	Construction, commissioning and operation								Contractor		
Develop appropriate plans for disposal of	Investigate different models and costs of								Municipality & Contractors		TBD

Deliverables/milestones		Year (2015/2016 – 2021/2022)							(Implementation mechanisms) Resources		
		1	2	3	4	5	6	7	Human resources <sup>18</sup>	Equipment	Estimated Cost
waste after closure of Devon Valley landfill (or earlier diversion to extent life)	diverting to alternative facilities/landfills <sup>23</sup>										
	Implement measures for alternative disposal								Municipality & Contractors		TBD
<b>Goal 6: Education and awareness</b>											
Develop an education and awareness strategy (including training material)									ASWM & Consultant		TBD
Roll out education and awareness campaigns									ASWM & Contractor		1% of budget?
Develop and implement competition programmes for educational institutions									ASWM and potential partners		TBD
<b>Goal 7: Compliance and enforcement</b>											
Develop strategy for enforcement (including system for residents to report transgressions)									SWM		TBD
Appoint and/or train staff									SWM		TBD
Enforce by-laws <sup>24</sup> (see also Goal 3)									SWM		TBD

<sup>23</sup> Models can include e.g. cost implications of partial diversion of current waste, versus diverting only after Devon Valley has reached capacity.

<sup>24</sup> Enforce law in the absence of by-laws

With the pressure Stellenbosch Municipality is facing concerning landfill airspace, it is critical to ensure the projects outlined in the implementation plan above commence as soon as possible. Although the MSA S78 (3) process is still in progress, it is highly likely that most of the projects will require capacity and expertise external to the municipality. However, to be able to manage the number of external consultants and contractors and ensure appropriate and effective delivery, it is important that Stellenbosch Municipality also has strong internal capacity. Stellenbosch Municipality should therefore ensure the necessary internal resources are made available to ensure appointment and management of appropriate external service providers. Furthermore, adequate financial resources need to be made available to enable appointment of competent external service providers with adequate project funding to enable projects to be scoped correctly to deliver appropriate outcomes.

## 11. Budget allocation (IDP)

The IDP has made provision for some of the initiatives that need to be put in place in order to drive diversion of waste from landfill. Table 14 highlights the key projects identified in the most recent approved iteration of the 2012-2017 IDP for Stellenbosch Municipality. The key requirement, as described earlier, is to ensure that human resources are made available to drive and manage these initiatives. Additional gaps that appear because of limited human resources include the heavy reliance on the municipality's Capital Replacement Reserve for infrastructure development – i.e. limited human resources to draw up proposals for alternative funding sources e.g. Green Fund<sup>25</sup>, Development Bank of South Africa and various donor funding sources<sup>26</sup>.

A number of additional sources of capital - including national and provincial grants – require time and planning to go through the application processes, which is difficult in the case of a municipality with a limited staff complement. With at least R106 million already identified as the infrastructure need over the next five years (see Table 14 below), it will become even more important to look at alternative sources of capital for infrastructure and funds for operating costs including salaries to have the appropriate staff complement. This shortfall of funding for what is required to address the immediate challenge of limited landfill airspace and enable proactive integrated waste management becomes readily evident when one compares the Implementation Plan (Table 13) to the IDP budget allocation (Table 14 below). It is imperative that the two tables line up, and the IDP budget allocation (including sources) is updated as the results of feasibility studies listed in the implementation plan become available.

<sup>25</sup> The Government of South Africa via the Department of Environmental Affairs (DEA) has set up a Green Fund to support the transition to a low carbon, resource efficient and climate resilient development path (<https://www.environment.gov.za/projectsprogrammes/greenfund>).

<sup>26</sup> [http://eadp.westerncape.gov.za/sites/default/files/municipal-library/DEA%26DP\\_Municipal\\_Funding\\_Directory\\_Final\\_Branded\\_Oct2013.pdf](http://eadp.westerncape.gov.za/sites/default/files/municipal-library/DEA%26DP_Municipal_Funding_Directory_Final_Branded_Oct2013.pdf)

TABLE 14: EXTRACT FROM STELLENBOSCH MUNICIPALITY 2015/16 REVIEW OF 2012-2017<sup>27</sup> IDP

Project Name	Funding Source	Annual projected infrastructure costs					Total Estimated Project Cost (Rands)
		2015/16	2016/17	2017/18	2018/19	2019/20	
Major Drop-offs : Construction - Franschhoek	CRR <sup>28</sup>	7,000,000	3,000,000				10,000,000
Major Drop-offs : Construction - Stellenbosch	CRR		7,000,000	3,000,000			10,000,000
Major Drop-offs : Construction - Klapmuts	CRR				7,000,000	3,000,000	7,000,000
Specialised vehicles	CRR		2,200,000	2,200,000			4,400,000
Skips				150,000	150,000	150,000	450,000
Waste to Energy - Planning	CRR	1,000,000					1,000,000
Waste to Energy - Implementation	CRR		5,000,000	4,000,000	11,000,000	11,000,000	35,000,000
Upgrade Refuse disposal site (Existing Cell) - Rehab	External Loans		6,000,000				6,000,000
Upgrade Refuse disposal site (Existing Cell) - Rehab	CRR	5,657,894					5,657,894
Upgrade Refuse disposal site (Existing Cell) - Rehab	Provincial Grant	3,319,974					3,319,974
Refuse satellite station - Raithby	CRR		500,000				500,000
Stellenbosch WC024 (MRF)-Design	External Loans	400,000					400,000
Stellenbosch WC024 (MRF)-Construct	CRR		6,000,000		11,700,000		17,700,000
Waste Minimisation Projects	CRR	500,000	1,000,000	500,000			2,000,000
Integrated Waste Management Plan	CRR		500,000				500,000
Waste Management Software	CRR			500,000			500,000

<sup>27</sup> The IDP timeframe runs from 2012 – 2017. However Table 14 extends to 2020, showing some of the identified needs for the next IDP cycle as Stellenbosch Municipality begins to plan for the 2017-2022 IDP cycle.

<sup>28</sup> CRR – Capital replacement reserve

Project Name	Funding Source	Annual projected infrastructure costs					Total Estimated Project Cost (Rands)
		2015/16	2016/17	2017/18	2018/19	2019/20	
Formalise skip areas in Franschoek and Kayamandi	CRR	90,000					90,000
Lockers for staff (+/- 70 lockers)	CRR	40,000					40,000
Air Conditioner Foremen offices	CRR	18,000					18,000
Weigh pad for Klapmuts Transfer Station	CRR	85,000					85,000
Waste to Food	CRR	400,000					400,000
Landfill Gas to Energy	CRR	500,000					500,000
<b>Total</b>		<b>20,045,868</b>	<b>31,385,000</b>	<b>9,940,000</b>	<b>29,850,000</b>		<b>106,370,000</b>

## 12. Conclusions and way forward

In conclusion, the review of Stellenbosch Municipality's Solid Waste Management since the implementation of plans in this current hybrid IWMP (2015-2022) has indicated significant progress in shifting towards legal and compliant operation. The next stage - addressing a shift towards more sustainable practices (including shifting the focus to implement waste management approach higher up in the waste hierarchy) - has begun to show promise and has received support from both the public as well as municipal and other public service officials. Achieving this shift will however take a more concerted approach, taking into account the significant budgetary implications to the municipality, and a potential need for changes to waste tariffs. However, these fiscal needs must be considered alongside, among others, Stellenbosch Municipality's goals of good governance and compliance, and its vision to be the greenest municipality and the preferred investment destination in the Western Cape (South Africa).

The key priority areas to be acted on over the next five years are therefore:

1. **Ensuring landfill availability:** Given the lead times for putting in place alternative treatment options, landfill will continue to be an important part of waste management. Identification and planning for an alternative landfill disposal location is required. Options that need to be investigated include:
  - a. Contracts with/collaboration between municipalities (e.g. City of Cape Town, Drakenstein).
  - b. A district level facility i.e. a landfill site built to serve more than one municipality within a district.<sup>29</sup> Currently there are plans for a site in Worcester, but this may not be financially attractive for both Stellenbosch and Drakenstein. Diversion to the proposed CoCT Regional Facility could be more cost effective.
2. **Localised waste solutions for Stellenbosch:** Treatment of waste at source to minimise transport costs, and extend longevity of Devon Valley landfill, by:
  - a. Diversion of as much waste from Franschhoek at source via development of a drop-off site (for recyclables, construction and demolition waste and general waste) and chipping garden waste at source.
  - b. Implementation of organic treatment within the informal settlements across the municipality in order to address both cleansing needs and to minimise transport costs, while reducing the amount of organics going to landfill.
3. **Diversion of dry recyclables from landfill:** implementation of recycling, including:
  - a. Possible extension of separation at source pilot programme for medium and high income households
  - b. Investigation of use of additional drop-off sites where possible.
  - c. Completion of feasibility assessment of developing a local MRF, and implementation of recommendations thereof.
  - d. Establishment and operation of buy-back centres particularly in low income areas to support informal sector recycling.
4. **Diversion of wet wastes (organics) from landfill:**

<sup>29</sup> District municipalities are mandated to provide bulk services such as landfills for more than one local municipality, as per the Municipal Structures Act (No 117 of 1998) which make provision for a District Municipality to assist local municipalities in this respect (Republic of South Africa, 1998)

- a. Completion of investigation into feasibility of waste-to-energy (e.g. anaerobic digestion) in Stellenbosch.
  - b. Completion of the Section 78 (3) process for identification of delivery- and funding mechanisms for waste services. (This is required due to the expected high capital and operating costs of the initiatives required for alternative waste management, and technical capacity required pointing towards collaboration with the private sector e.g. leveraging private sector investment through , for example, potential public-private partnerships).
5. **Regional collaboration for economies of scale:** There is a strong argument for development of collaborative solutions to obtain economies of scale to make alternatives waste treatment financially viable. However, the key challenge is ensuring a coordinated approach from the different stakeholders (municipalities) from an early stage. This will allow all parties to provide input and work towards a common goal from the onset. It is therefore imperative to ensure the Section 78 (3), when conducted, explores the viability of collaboration with other municipalities in more details including the potential costs and risks for Stellenbosch.

As indicated, implementing effective solutions in these key priority areas, as well as delivering on the full Implementation plan will require investment in human capital to ensure effective delivery as well as significant investment to do the necessary studies and put in place the infrastructure to address the immediate challenges and ensure long term sustainable waste management for Stellenbosch Municipalities residents. However, the plans outlined here also represents an opportunity for Stellenbosch Municipality to lead by example in terms of effective Integrated Waste Management and demonstrable achievement of its Vision and all five of its stated goals



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