

**LANGEBERG MUNICIPALITY**  
**DRAFT AIR QUALITY MANAGEMENT PLAN**  
**2016 -2021**



**LANGEBERG**

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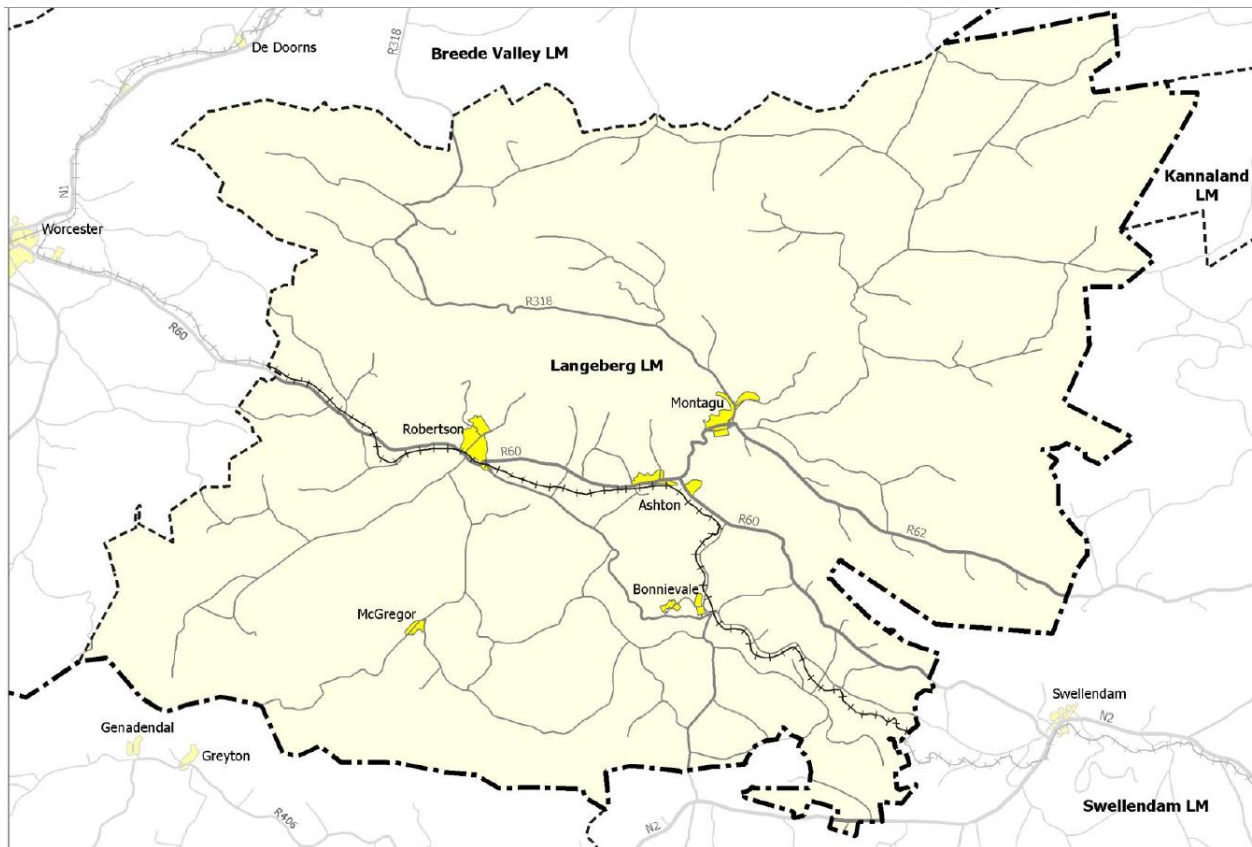
## Air Quality Management: Langeberg Municipality

### 1 Forward

#### 1.1 Overview

The Langeberg Municipality is situated in the Cape Winelands District Municipality, Western Cape, South Africa and covers an area of 4 517.4km<sup>2</sup>. Langeberg towns include; Ashton, Bonnievale, McGregor, Montagu and Robertson. The area is well known for wine making, fruit farming, dried fruit, olive production and horse stud farms. There are large portions of natural veld and mountainous areas including the Langeberg and Riviersonderend Mountain Ranges. The Langeberg is bisected by the Breede River from which the area obtains its water supply, both domestic and agricultural.

Map of the Langeberg Municipal area



## 1.2 Langeberg Demographics

- Total population: 102 472
- Projected population for 2020: 106 016
- Population Growth Rate: 4.4%
- Poverty: 12% of households earn less than R400.00 per month (2011)
- Number of households: 27 566
- Access to basic service delivery:
  - Water: 97.8%
  - Refuse removal: 72.0%
  - Electricity: 94.3%
  - Sanitation: 89.2%

## 1.3 Main Economic Activities

The three largest contributors to GDP in 2013 for the Langeberg region were;

Manufacturing at 32%

Agriculture, forestry and fishing at 18%

Wholesale and retail trade, catering, and accommodation services at 13%

## 1.4 Climate for the Langeberg region

Temperature – The lowest temperatures are experienced during July while the highest are experienced during February. Temperatures of 40°C and higher are experienced during January and February. Temperatures of 0°C can be recorded in the mornings, during the coldest months

Rainfall – The higher rainfall months are recorded between June, July and August. July is the highest rainfall month with approximately 35mm of rainfall. The lowest rainfall months are between January and February. The highest rainfall is experienced along the Langeberg Mountains. Rainfall in this area is between 400mm to more than 1 000mm per year. High rainfall of more than a 1 000mm per year is experienced along the Riviersonderend Mountains in the south

Wind – During summer the predominant wind direction is South East while in winter it is West North West. The southern part of the Langeberg Municipal region, along the Riviersonderend Mountains, has a mean annual wind speed of 8 – 9m/s with most of the Municipal area being between 3 – 6m/s.

## **2 Introduction**

### **2.1 National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004)**

The National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) (NEM: AQA) must be interpreted and applied in accordance with the principles specified in the National Environmental Act, 1998 (Act 107 of 1998) (NEMA). NEM: AQA serves to repeal the Atmospheric Pollution Prevention Act, 1965 (Act 45 of 1965)

Section 2 of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) describes the objectives of the act, which are:

- (a) To protect the environment by providing reasonable measures for:
  - a. The protection and enhancement of the quality of air in the Republic
  - b. The prevention of air pollution and ecological degradation
  - c. Securing ecological sustainable development while promoting justifiable economic and social development
- (b) Generally give effect to Section 24 (b) of the Constitution of South Africa to enhance the quality of ambient air for the sake of securing an environment that is not harmful to the health and well-being of people.

To give effect to the above mentioned rights in the context of air quality, it is necessary that levels of air pollution are not harmful to human health or wellbeing, which means that the settings of ambient air quality standards are necessary as well as ensure that the ambient air standards are achieved and maintained. Hence, National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) provides an objective based approach to the management of air quality at different governance and operational levels and is the legislative means to ensure that the rights described above are upheld. According to the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) , the Department: Environmental Affairs, Provincial Environmental Departments and Local Authorities are separately and jointly responsible for the implementation and enforcement of various aspects of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) .

All these spheres of government are obliged to co-operate with each other and co-ordinate their activities through mechanisms provided for in the National Environmental Management Act, 1998 (Act 107 of 1998). Therefore, in implementing National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004), it is necessary to ensure that there is clarity on governance and technical objectives so that air quality measures are implemented in a cohesive, coherent and uniform manner that ensures the most benefit for the least cost through efficient and effective use of resources.

Section 15 (1) of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) requires that each National Department or Province responsible for preparing an environmental implementation or management plan in terms of Chapter 3 of the National Environmental Act, 1998 (Act 107 of 1998), must include an Air Quality Management Plan

Furthermore, Section 15(2) National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) states that “each Municipality must include in its Integrated Development Plan (IDP) contemplated in Chapter 5 of the Municipal Systems Act, 2000 (Act 32 of 2000), an Air Quality Management Plan.”

Section 34 of the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) addresses measures pertaining to the control of noise, which states that:

- 1) The Minister may prescribe essential national standards:
  - a. For the control of noise, either in general or by specified machinery or activity or in specified places or areas; or
  - b. For determining:
    - i. A definition of noise
    - ii. The maximum levels of noise
- 2) When controlling noise, the Provincial and Local spheres of government are bound by any prescribed national standards
- 3)

#### 2.1.1 The contents of an Air Quality Management Plan

Section 16 (1) of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) provides the framework of the contents of an Air Quality Management Plan and must:

- a) Within the domain of the relevant National Department, Province or Municipality, seek:
  - a. To give effect, in respect of air quality, to Chapter 3 of the National Environmental Act, 1998 (Act 107 of 1998) to the extent that the Chapter is applicable to it.
  - b. To improve air quality
  - c. To identify and reduce the negative impact on human health and the environment of poor air quality
  - d. To address the effects of emissions from the use of fossil fuels in residential applications
  - e. To address the effects of emissions from industrial sources
  - f. To address the effects of emissions from any point or non-point source of air pollution other than those contemplated in sub paragraph (c) and (d)
  - g. To implement the Republic’s obligation in respect of international agreements
  - h. To give effect to best practice in air quality management
- b) Describe how the relevant National Department, Province and Municipality will give effect to its air quality management plan
- c) Comply with such other requirements as may be described by the Minister

#### 2.2 Definition of an Air Quality Management Plan (AQMP)

The following is stated in the Manual for Air Quality Management Planning (April 2012)

An Air Quality Management Plan (AQMP) describes the current state of air quality in the area, how it has been changing over recent years, and what could be done to ensure clean air quality in a region. It provides goals and objectives for a region and prescribes short and long term policies and controls to improve air quality.

An Air Quality Management Plan sets a course of action that will attain air quality goals in a specified geographical area. It requires actions by Government, business, industry, non-governmental organizations (NGO's) and the population, as its success will depend on support from all these sectors.

The main purpose of the Air Quality Management Plan development process is to establish an effective and sound basis for planning and management of air quality in a defined area. This type of planning will ensure that significant sources of impacts are identified and controlled in a most cost effective manner. The best air quality management tools and practices are used in order to assure the most adequate solutions. The ultimate goal is to ensure that health effects and impact on building materials and the environment will be minimized in the future.

### 2.3 Key Management Plans prepared pertaining to the Management of Air Quality

A number of plans and frameworks pertaining to air quality management were prepared on various Government levels that should inform and provide context for the Langeberg Municipality Air Quality Management Plan.

This includes

#### 2.3.1 National Level

##### 2.3.1.1 National Framework for Air Quality Management in South Africa (2007 and revised in 2012)

The purpose of the National Framework is to achieve the objectives of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004), and as such the National Framework provides a medium to long plan of the practical implementation of the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004). It provides mechanisms, systems and procedures to promote holistic and integrated air quality management through pollution prevention and minimization at source, and through impact management with respect to the receiving environment from local scale to international issues. Hence, the National Framework provides norms and standards for all technical aspects of air quality management.

Section 7(5)(d) of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) states that the National Framework must be reviewed by the Minister at intervals of not more than five years.

##### 2.3.1.2 Manual for Air Quality Management Plan (2008 and revised in 2012)

The Department: Environmental Affairs (DEA) prepared the Manual for Air Quality Management Planning to provide guidance on how to compile an Air Quality Management Plan to achieve the objectives of National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004), as outlined in Chapter 3 and 4 of the act. The manual focuses on the development of Municipal and Provincial Air Quality Management Plans, while further guidance on developing an Air Quality Management Plan for a National Department will be included in the guideline document on developing an Environmental Management Plan (EMP).

The implementation manual is a guide and should be read in conjunction with National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004), guiding documents on air quality monitoring and related activities, in particular the document published by Department: Environmental Affairs as part of Air and Atmospheric Quality publications noted in Appendix A of the National Framework for Air Quality Management in South Africa (2012)

## 2.3.2 Provincial Level

### 2.3.2.1. Air Quality Management Plan for the Western Cape Province (March 2010 (Presently under review))

The vision of the Western Cape Air Quality Management Plan is “*clean and healthy air for all in the Western Cape*” which is supported by the mission statement that states: “*To ensure the effective and consistent implementation of sustainable air quality management practices, by all spheres of government, relevant stake holders and civil society to progressively achieve and efficiently maintain clean and healthy air in the Western Cape*”

Four goals of the Air Quality Management Plan support the vision and mission, with each goal addressing the different aspects of the vision and are underpinned by objectives to achieve them. These are:

- 1) To ensure effective and consistent Air Quality Management
  - a. To strengthen and build capacity in Air Quality Management
  - b. To promote co-operation amongst all spheres of government, business, industry and civil society
  - c. To develop institutional mechanisms to implement the Air Quality Management Plan
  - d. To develop, implement and maintain Air Quality Management systems
  - e. To ensure adequate funding for the implementation of the Air Quality Management Plan by Municipalities.
- 2) To continually engage with stakeholders to raise awareness with respect to air quality
  - a. To develop comprehensive education and communication mechanisms, strategies and programmes with respect to air quality management
  - b. To promote environmental best practices and cleaner development technologies among all stake holders.
- 3) To ensure effective and consistent compliance monitoring and enforcement
  - a. To promote compliance monitoring and enforcement
  - b. To promote continuous improvement with respect to compliance
  - c. To ensure that health based air quality standards are attained and continually met
- 4) To support climate change protection programmes, including promoting the reduction of greenhouse gas emissions
  - a. To reduce ozone depleted substances and greenhouse gasses, in line with National and International requirements.

## 2.3.3 District Municipal Level

### 2.3.3.1 Cape Winelands District Municipality Air Quality Management Plan (2010)

The Air Quality Management function within the Cape Winelands District Municipality resolves under the Municipal Health Services Department, with the Director: Municipal Health Services designated as the Air Quality Officer.

The Cape Winelands District Municipality is located in the Western Cape and the district comprises of 5 local municipalities; namely: Breede Valley Municipality, Drakenstein Municipality, Langeberg Municipality, Stellenbosch Municipality and Witzenberg Municipality.



According to the National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004), a District Municipality has three primary statutory obligations with which it must comply, namely

- a) Discharge the role of an atmospheric licensing authority
- b) Designate an Air Quality Officer
- c) Incorporate an Air Quality Management Plan in its Integrated Development Plan and establish the framework for Air Quality Management Plans for incorporation in its constituent local municipalities. In this regard, it is fundamental to note that by the inclusion of an Air Quality Management Plan in its Integrated Development Plan. A Municipality becomes obliged to enforce and implement what is contained in the Air Quality Management Plan.

#### 2.3.3.2 Air Quality Management Plan Goals

The goals of the Cape Winelands District Municipality – Air Quality Management Plan are threefold

- 1) Effective Air Quality Management by:
  - a. Building capacity in air quality management within the Municipal Health Services Directorate.
  - b. Developing and implementing an effective Air Emissions Licensing System
  - c. Developing, implementing and maintaining an Air Quality Management System
  - d. Establishing an annual Air Quality Management review process
  - e. Establishing an emissions reduction strategy
- 2) Promote communication in relation to Air Quality Management by
  - a. Establishing an Air Quality Forum in order to ensure proper communication between Local and Provincial Government, business and industry, as well as interested and affected parties
- 3) Compliance monitoring
  - a. Establish a compliance monitoring system within the Cape Winelands District Municipality
  - b. Ensure continuous compliance with Atmospheric Emission Licensing Conditions

### **3 Vision and Mission of Langeberg Municipality**

#### 3.1 Vision Statement

To be a Municipality where the constitutional right of all residents, to a high level of air quality, is continuously upheld, to benefit economic and social development and promote the health of all its residents.

#### 3.2 Mission Statement

To implement sustainable air quality management practices throughout the Langeberg Municipal area to progressively achieve and maintain air quality goals.

### 3.3 Air Quality Management Goals

- To ensure effective and consistent air quality management by including all spheres of Government and other relevant stakeholders.
- To continually engage with all stakeholders to raise awareness with respect to air quality, in order that the Air Quality Management Plan can be successfully implemented
- To ensure effective and consistent compliance, monitoring and enforcement and to keep industry abreast with new developments.
- To support climate change protection programmes, including promoting the reduction of greenhouse gas emissions.

### 4 Status Quo of Air Quality Management in Langeberg Municipality

The current state of Air Quality Management in the Langeberg Municipality can be summarized in the following table:

<b>Requirement</b>	<b>Status</b>	<b>Comment</b>
Appointment of an Air Quality Officer	Yes	Appointed on the 4 July 2014
Air Quality Management Plan included in Integrated Development Plan	No	Currently drafting an Air Quality Management Plan for the Langeberg Municipal area
Budget allocated for Air Quality Management Plan	No	Certain activities are included in the normal operational budget but no specific budget for Air Quality Management
Capacity		
Human resource's	Limited	Duties are an additional function allocated to the appointed incumbent
Equipment	No	Funding will have to be made available in future budgets for hand held or stationary equipment
Skills	Limited	Attend workshops offered by Department: Environmental Affairs and Development Planning
Co-operative Governance	Yes	Interaction with the Cape Winelands District Municipality and the Department: Environmental Affairs and Development Planning
Sources of Air Pollution in the Langeberg Municipal area	Yes	Industrial operations; spray painting, petrol stations and brick making Agricultural activities: crop spraying Biomass and domestic fuel burning: veld fires and using wood / coal for heating and cooking Vehicle emissions: both petrol and diesel engines Waste treatment and disposal sites Odours Noise
Ambient Air Quality Monitoring	No	No ambient air quality monitoring done

## **5 Implementation Plan for the Langeberg Municipality**

<b><u>Objective</u></b>	<b><u>Time Frame</u></b>	<b><u>Description</u></b>	<b><u>Comments</u></b>	<b><u>Budget required</u></b>	<b><u>Responsibility</u></b>
Appointment of Air Quality Officer	Air Quality Officer appointed on the 4 July 2016	To appoint an Air Quality Officer to render an air quality service in the Langeberg area	Appointed on the 4 July 2014	No	Municipal manager
Capacity building	Continuous.	Improve knowledge and skills.	Attend the Cape Winelands District Municipal and Department: Environmental Affairs and Development planning Air Quality Officers Forum	Yes	Air Quality Officer  Director: Strategy and Social Development  Municipal Manager
Establishment of an Air Quality Forum for the Cape Winelands District Municipality	Medium term	Regularly attend meetings and transfer knowledge and information	Collaboration with all Local Municipalities in the Cape Winelands Municipal area and include Department: Environmental Affairs and Development Planning	Yes	Air Quality Officer
To compile a comprehensive emission inventory	Medium term	Emission inventory list	Visit all possible pollution sources in the Langeberg area. Liaise with the Cape Winelands District Municipality	Yes	Air Quality Officer
Effectively deal with complaints	Continuous	Complaints	All complaints regarding air quality, noise and dust are lodged with the Call Centre and referred to AQO	No	Air Quality Officer

Education activities / initiatives	Short to medium term	Environmental education awareness programmes	Target audience: Schools industry	Yes	Air Quality Officer
Air quality by-law	Long term	Local Air Quality by-law for the Langeberg Municipal area	To maintain and enforce air quality in the Langeberg Municipal area	Yes	Air Quality Officer for the Cape Winelands District Municipality  Director: Corporate Services  Director: Strategy and Social Development
Climate change	Long term	Climate change strategy for the Langeberg Municipality	Alignment between the Air Quality Management Plan and Climate Change Strategy	No	Department: Environmental Affairs and Development Planning  Cape Winelands District Municipality  Langeberg Municipality

Short Term                      6 to 12 months

Medium Term                      12 to 24 months

Long Term                      24 months and longer but not exceeding 60 months

## **6 Monitoring**

Monitoring and reporting on progress with regards to the implementation of the Air Quality Management Plan will be done on a continuous basis both internally and externally, including the Department: Environmental Affairs and Development Planning and the Cape Winelands District Municipality

## **7 Evaluation**

Continuous evaluation will form an essential part of the Air Quality Management Plan. Annual assessments will determine and highlight shortcomings, strengths and potential areas of concern.

Preferably, this should be done by a local evaluation committee. The Local Evaluation Committee should be appointed by Council and comprise of appropriately skilled persons

## **8 Review**

The Air Quality Management Plan should be reviewed in accordance with the contents of section 5 (Implementation Plan for the Langeberg Municipality) of this document and should take place every 5 years. This should be done through a limited public participation process.